

SAMSUNG

GSM TELEPHONE

GT-I8160

SERVICE Manual

GSM TELEPHONE

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Notice: All functionality, features, specifications, and other product information provided in this document, including but not limited to, benefits, design, pricing, components, performance, availability, and capabilities of the product are subject to change without notice. Samsung reserves the right to alter this document or the product described herein at anytime, without obligation to provide notification of such changes.

**SAMSUNG
ELECTRONICS**



2. Specification

2-1. GSM General Specification

	GSM850	EGSM 900	DCS1800	PCS1900	WCDMA 2100	WCDMA 900
Freq. Band[MHz] Uplink/ Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1922~1977 2112~2167	880~915 925~960
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810	UL: 9612~9888 DL: 10562~10838	UL: 2712~2863 DL: 2937~3088
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz	190MHz	45MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps	3.84Mcps
Time Slot Period/ Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	FrameLength: 10ms Slotlength: 0.667ms	FrameLength: 10ms Slotlength: 0.667ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK	QPSKHQPSK	QPSKHQPSK
MS Power	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm~ -50dBm	24dBm~ -50dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl	3(max+24dBm)	3(max+24dBm)
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm	-106.7dBm	-106.7dBm
TDMA Mux	8	8	8	8	8	8
Cell Radius	35Km	35Km	2Km	2Km	2Km	2Km

2-2. GSM Tx Power Class

TX Power control level	GSM850	TX Power control level	EGSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9±3dBm	17	9±3dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
				15	0±5 dBm	15	0±5 dBm

3. Operation Instruction and Installation

Main Function

1. Android Gingerbread
2. HSDPA 14.4 / HSUPA 5.76Mbps
3. 3.8" WVGA TFT (PLS type)
4. 5MP AF + LED Flash / VGA Front
5. A-GPS, WiFi 802.11 b/g/n, BT 3.0, USB 2.0
6. Sensors : Accelerometer, Compass, Proximity
7. TouchWiz UX for Android
8. Social Hub, Music Hub, Game Hub
9. 1 dome key(Home) + 2 touch keys(Menu, Back)

6. Level 6 Repair

6-1. S/W installation

6-1-1. Required items in order to install S/W

- Installation program: Downloader Program ([Odin3 v1.83.exe](#))
- GT-I8160 Mobile Phone
- Data Cable
- JIG BOX (GH99-36900B)
- JIG Cable (GH81-10588A or GH81-10579A or GH81-10580A)
- Adapter (GH99-38251A)
- Serial Cable
- Mobile device specific S/W: Binary files ++

※ Settings



Connect ANYWAY JIG BOX
with JIG CABLE (Phone to JIG)
or PC to Phone Using Data Cable



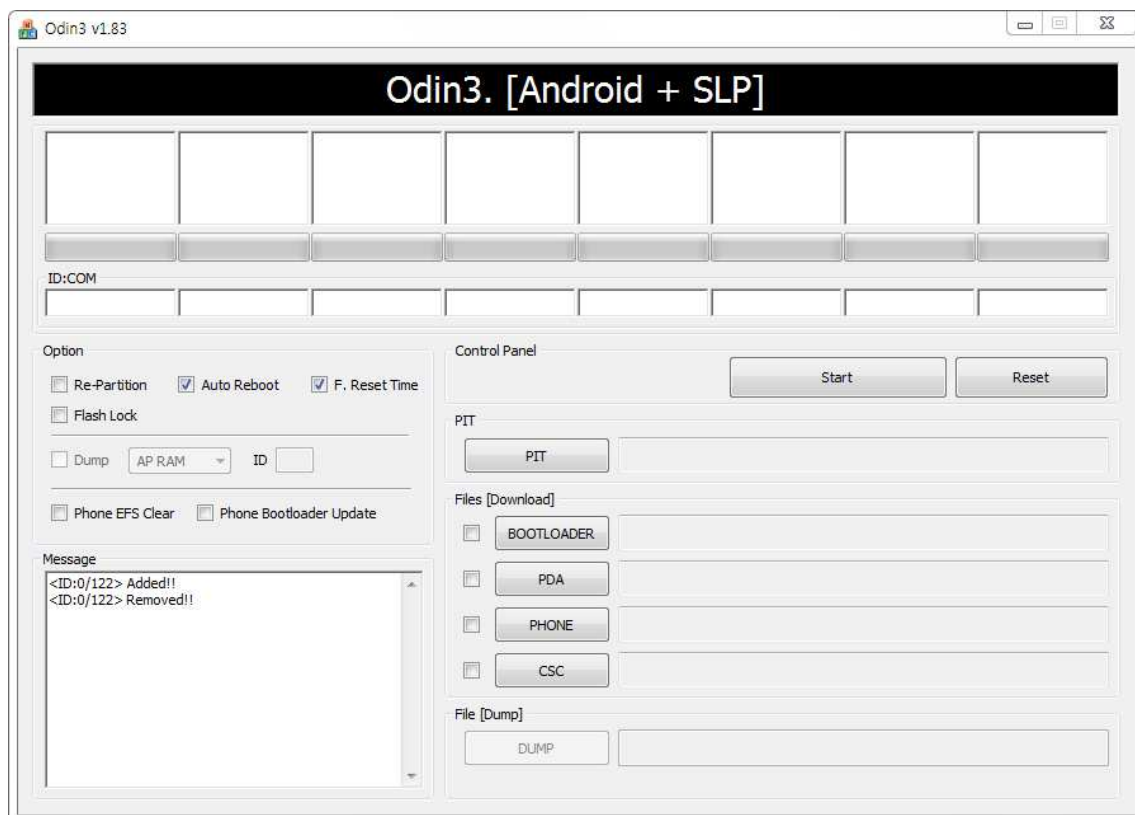
Chipset Solution Switch - 6



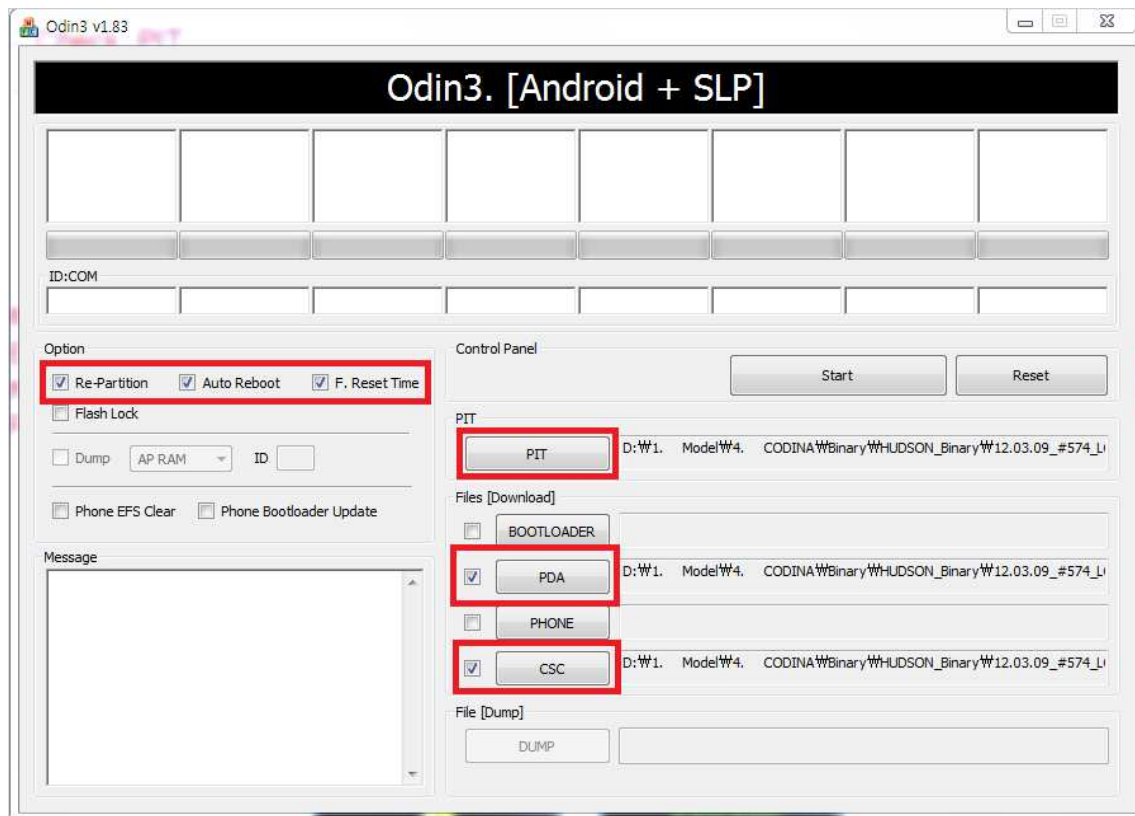
No.	solution
1	AGERE (Agere TC)
2	VISION (HP, Vision, Infineon)
3	SYSOL (NXP Sysol)
4	SWIFT (NXP Swift, Broadcom)
5	UMTS (Qualcomm)
6	EMP
7	UMTS (UART 1.8V)

6-1-2. S/W Installation Program (Downloader program)

- Open up the S/W Installation Program by executing the **"Odin3 v1.83.exe"**

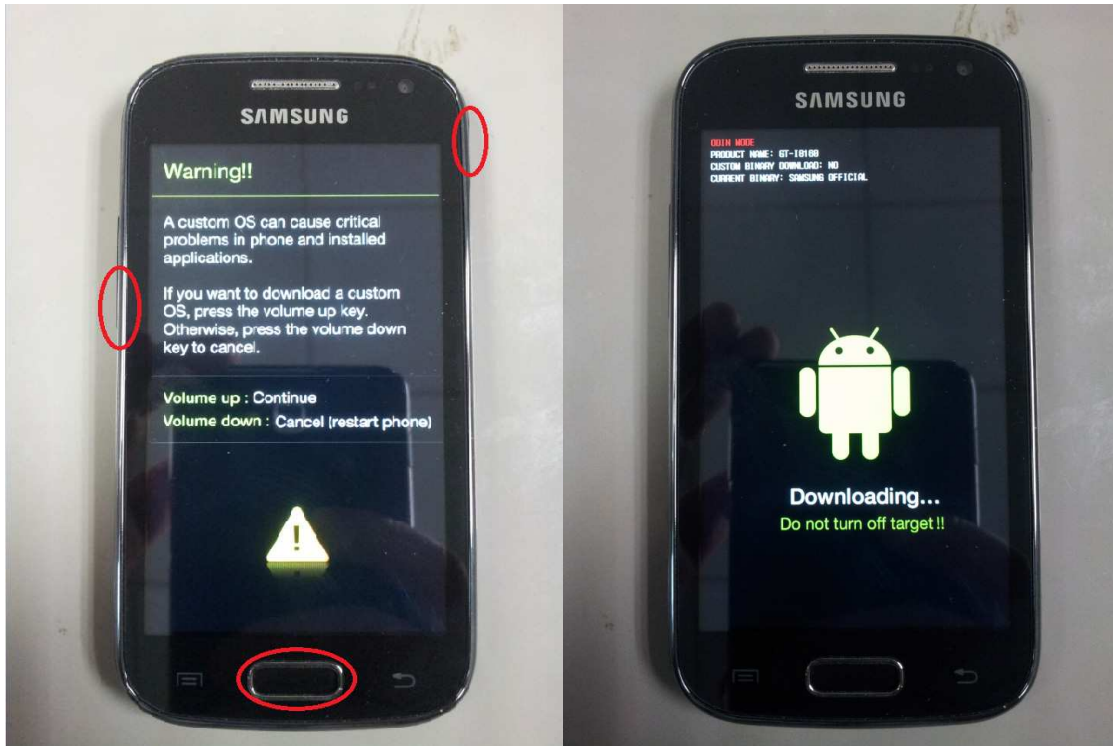


1. Enable the check mark by click on the following options,
 - Re-Partition, Auto Reboot, and F. Reset Time
 - Check PIT
 - Check PDA, and CSC Files



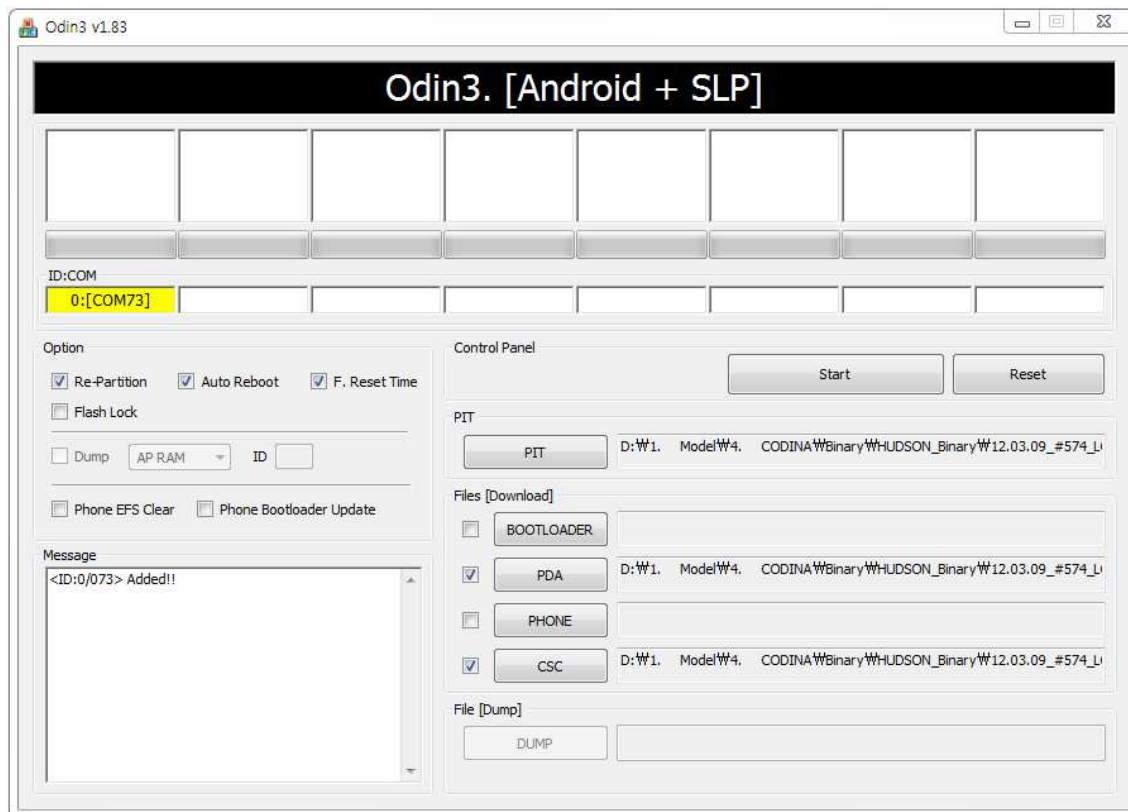
2. Enter into Download Mode

- Enter into Download Mode by pressing Volume Down button, Home button, and ON/OFF Button simultaneously. Once the 1st warning screen appears, press Volume UP button for custom OS download mode. Then the 2nd display will appear.

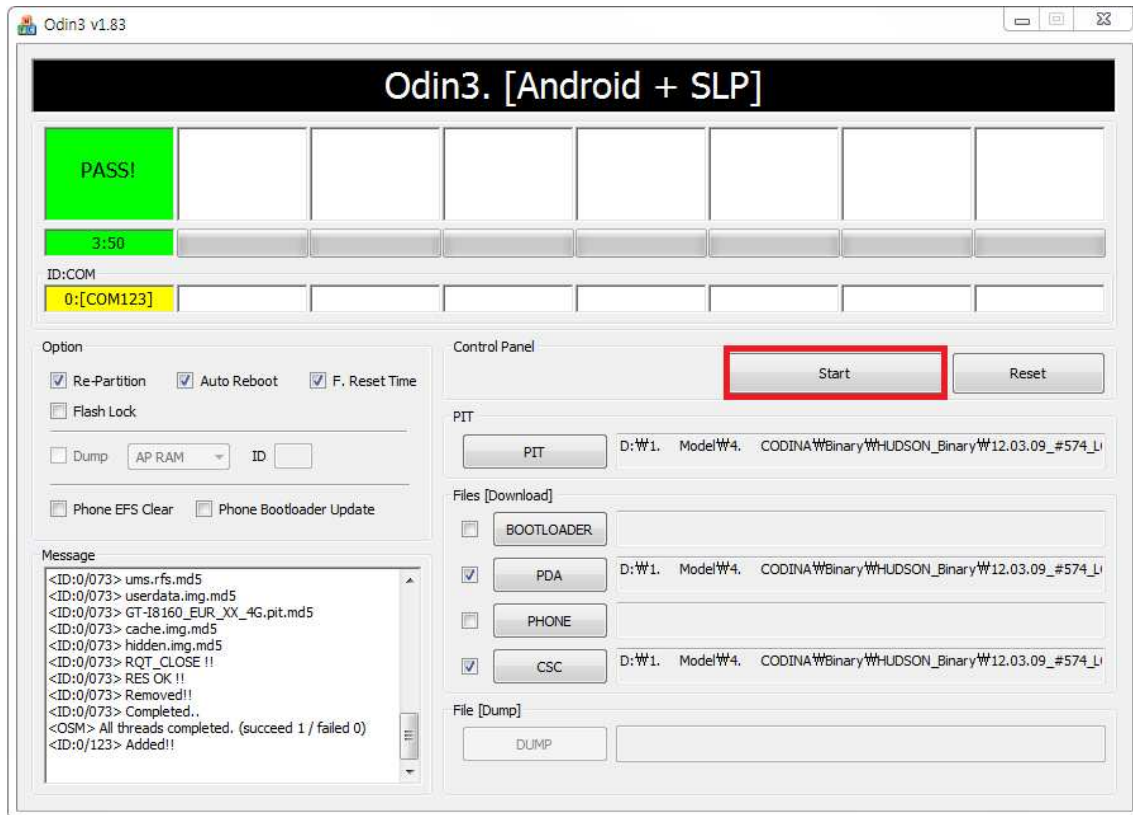


3. Connect the device to PC via Data Cable.

Make sure that the one of communication port [ID:COM] box is highlighted in yellow. The device is now connected with the PC and ready to download the binary file into the device.



4. Start downloading binary file into the device by clicking Start Button on the screen.
the green colored "PASS!" sign will appear on the upper-left box if the binary file has been successfully downloaded into the device.



5. Disconnect the device from the Data cable.
6. Once the device boots up, you can check the version of the binary file or name by pressing the following code in sequence;
***#1234#**

You can perform full reset by pressing the following code in sequence;

***2767*3855#**

9. Reference Abbreviate

Reference Abbreviate

- AAC: AdvancedAudioCoding.
- AVC: AdvancedVideoCoding.
- BER: BitErrorRate
- BPSK: BinaryPhaseShiftKeying
- CA: ConditionalAccess
- CDM: CodeDivisionMultiplexing
- C/I: Carrier to Interference
- DMB: DigitalMultimediaBroadcasting
- E: European Standard
- ES: ElementaryStream
- ETSI: EuropeanTelecommunicationsStandardsInstitute
- MPEG: MovingPictureExpertsGroup
- PN: Pseudo-randomNoise
- PS: PilotSymbol
- QPSK: QuadraturePhaseShiftKeying
- RS: Reed-Solomon
- SI: ServiceInformation
- TDM: TimeDivisionMultiplexing
- TS: TransportStream

1. Safety Precautions

1-1. Repair Precaution

Before attempting any repair or detailed tuning, shield the device from RF noise or static electricity discharges.

Use only demagnetized tools that are specifically designed for small electronic repairs, as most electronic parts are sensitive to electromagnetic forces.

Use only high quality screwdrivers when servicing products. Low quality screwdrivers can easily damage the heads of screws.

Use only conductor wire of the properly gauge and insulation for low resistance, because of the low margin of error of most testing equipment.

We recommend 22-gauge twisted copper wire.

Hand-soldering is not recommended, because printed circuit boards (PCBs) can be easily damaged, even with relatively low heat. Never use a soldering iron with a power rating of more than 100 watts and use only lead-free solder with a melting point below 250°C (482°F).

Prior to disassembling the battery charger for repair, ensure that the AC power is disconnected. Always use the replacement parts that are registered in the SEC system. Third-party replacement parts may not function properly.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Many semiconductors and ESDs in electronic devices are particularly sensitive to static discharge and can be easily damaged by it. We recommend protecting these components with conductive anti-static bags when you store or transport them.

Always use an anti-static strap or wristband and remove electrostatic buildup or dissipate static electricity from your body before repairing ESDs.

Ensure that soldering irons have AC adapter with ground wires and that the ground wires are properly connected.

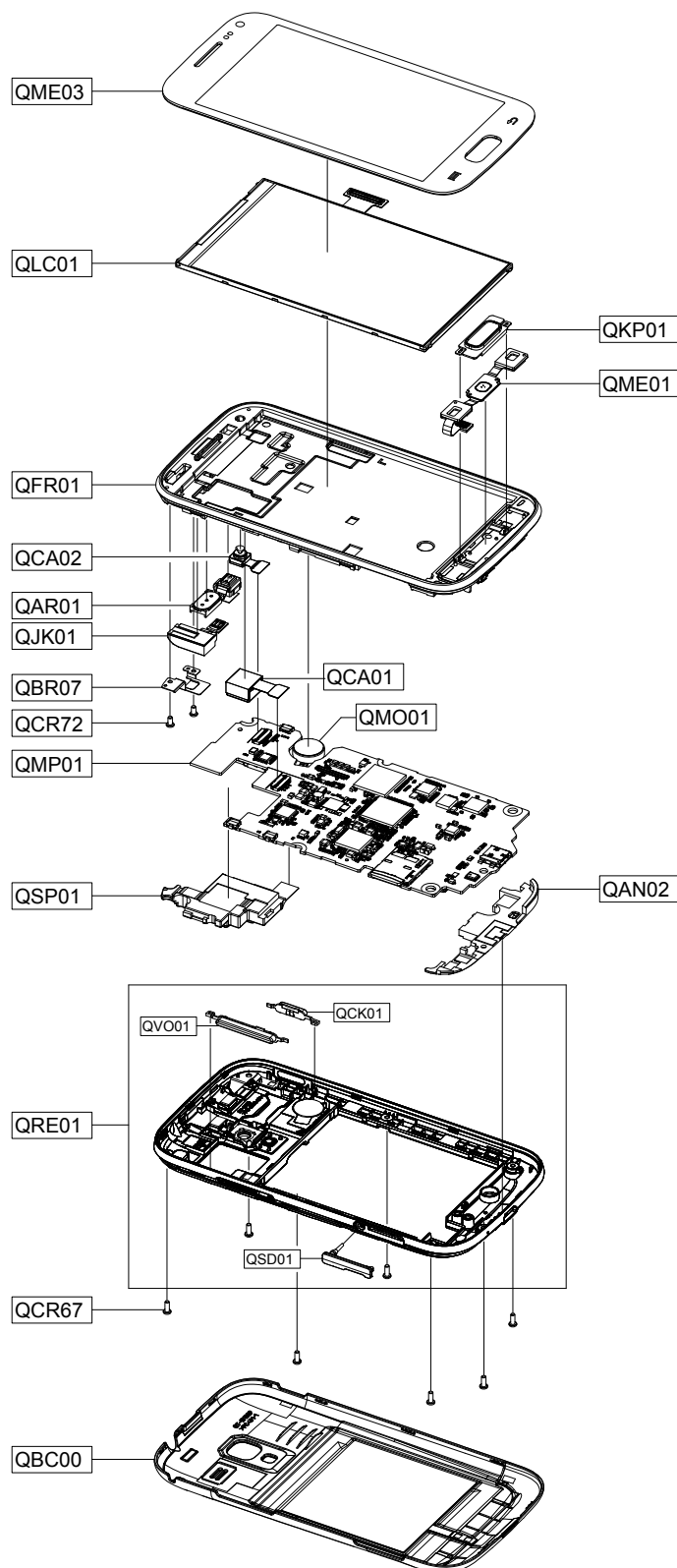
Use only desoldering tools with plastic tips to prevent static discharge.

Properly shield the work environment from accidental electrostatic discharge before opening packages containing ESDs.

The potential for static electricity discharge may be increased in low humidity environments, such as air-conditioned rooms. Increase the airflow to the working area to decrease the chance of accidental static electricity discharges.

4. Exploded View and Parts List

4-1. Cellular phone Exploded View



5. MAIN Electrical Parts List

Design LOC	SEC CODE	Description
D400	0401-001110	DIODE-SWITCHING
ZD500	0403-001870	DIODE-ZENER
D500	0404-001646	DIODE-SCHOTTKY
ZD502	0406-001329	DIODE-TVS
ZD300,ZD301,ZD400	0406-001514	DIODE-TVS
ZD401,ZD504,ZD505	0406-001514	DIODE-TVS
ZD506,ZD507	0406-001514	DIODE-TVS
Q100	0501-002711	TR-SMALL SIGNAL
Q500	0505-001518	FET-SILICON
U407	0801-003435	IC
U201	1001-001715	IC
U501	1001-001734	IC
U200	1201-002608	IC
PAM100	1201-003330	IC
U403	1203-005512	IC
U503	1203-005831	IC
U504	1203-006767	IC
U400	1203-007143	IC
U101	1203-007186	IC
U406	1203-007203	IC
U507	1203-007251	IC
U300	1203-007294	IC
U202	1205-004396	IC
U206	1205-004402	IC
U508	1205-004414	IC
U205	1209-002140	IC
U203	1209-002144	IC
TH400	1404-001221	THERMISTOR
ZD503	1405-001346	VARISTOR
R108,R441	2007-000138	R-CHIP
R103,R104,R105	2007-000140	R-CHIP
R313,R314,R318,R319	2007-000141	R-CHIP
R320,R321,R323,R324	2007-000141	R-CHIP
R325,R326,R512,R513	2007-000141	R-CHIP
R514	2007-000141	R-CHIP
R100,R101,R102	2007-000143	R-CHIP

Design LOC	SEC CODE	Description
R106,R107,R308,R440	2007-000148	R-CHIP
R524,R544,R545	2007-000148	R-CHIP
R109	2007-000153	R-CHIP
R300,R301,R302,R303	2007-000157	R-CHIP
R304,R305,R306,R307	2007-000157	R-CHIP
R520	2007-000157	R-CHIP
R110,R316,R442,R454	2007-000162	R-CHIP
R455,R456,R506,R522	2007-000162	R-CHIP
R523,R536,R542,R547	2007-000162	R-CHIP
R548	2007-000162	R-CHIP
R426	2007-000163	R-CHIP
R518	2007-000165	R-CHIP
R530	2007-000168	R-CHIP
R535	2007-000170	R-CHIP
R201,R402	2007-000172	R-CHIP
R519	2007-000758	R-CHIP
R508	2007-001292	R-CHIP
R443	2007-003010	R-CHIP
R505,R507	2007-003015	R-CHIP
R310	2007-003025	R-CHIP
R551	2007-003112	R-CHIP
R207	2007-007132	R-CHIP
R427	2007-007135	R-CHIP
R537,R539	2007-007190	R-CHIP
R540	2007-007317	R-CHIP
R327	2007-007318	R-CHIP
R338	2007-007468	R-CHIP
R309,R340	2007-007517	R-CHIP
R409,R410,R411,R415	2007-008055	R-CHIP
R205	2007-008579	R-CHIP
R404	2007-008633	R-CHIP
R337	2007-009804	R-CHIP
R403	2007-010783	R-CHIP
R521	2007-010883	R-CHIP
C102,C104,C107,C202	2203-000233	C-CERAMIC,CHIP
C204,C216	2203-000233	C-CERAMIC,CHIP

Design LOC	SEC CODE	Description
C137,C156,C157,C158	2203-000254	C-CERAMIC,CHIP
C211,C541,C555,C574	2203-000254	C-CERAMIC,CHIP
C217,C220,C221,C222	2203-000278	C-CERAMIC,CHIP
C153,C154	2203-000330	C-CERAMIC,CHIP
C556,C557,C562	2203-000386	C-CERAMIC,CHIP
C169,C213,C466,C469	2203-000438	C-CERAMIC,CHIP
C474	2203-000438	C-CERAMIC,CHIP
C247	2203-000585	C-CERAMIC,CHIP
C219	2203-000627	C-CERAMIC,CHIP
C145,C149,C150,C152	2203-000812	C-CERAMIC,CHIP
C212	2203-000812	C-CERAMIC,CHIP
C516	2203-000854	C-CERAMIC,CHIP
C114,C542,C543	2203-000995	C-CERAMIC,CHIP
C512,C558,C559,C560	2203-001153	C-CERAMIC,CHIP
C136,C138,C139,C141	2203-002443	C-CERAMIC,CHIP
C155	2203-002443	C-CERAMIC,CHIP
C103,C144	2203-002668	C-CERAMIC,CHIP
C227	2203-005729	C-CERAMIC,CHIP
C250	2203-005792	C-CERAMIC,CHIP
C200	2203-006047	C-CERAMIC,CHIP
C162,C163,C231,C232	2203-006048	C-CERAMIC,CHIP
C233,C277,C300,C302	2203-006048	C-CERAMIC,CHIP
C305,C309,C310,C311	2203-006048	C-CERAMIC,CHIP
C312,C313,C314,C318	2203-006048	C-CERAMIC,CHIP
C319,C320,C324,C325	2203-006048	C-CERAMIC,CHIP
C326,C327,C328,C339	2203-006048	C-CERAMIC,CHIP
C341,C342,C344,C345	2203-006048	C-CERAMIC,CHIP
C346,C347,C351,C352	2203-006048	C-CERAMIC,CHIP
C353,C354,C356,C357	2203-006048	C-CERAMIC,CHIP
C358,C359,C360,C363	2203-006048	C-CERAMIC,CHIP
C364,C365,C366,C368	2203-006048	C-CERAMIC,CHIP
C406,C407,C408,C409	2203-006048	C-CERAMIC,CHIP
C415,C423,C440,C453	2203-006048	C-CERAMIC,CHIP
C454,C470,C471,C472	2203-006048	C-CERAMIC,CHIP
C477,C478,C480,C490	2203-006048	C-CERAMIC,CHIP
C492,C496,C513,C528	2203-006048	C-CERAMIC,CHIP

Design LOC	SEC CODE	Description
C537,C538	2203-006048	C-CERAMIC,CHIP
C203	2203-006121	C-CERAMIC,CHIP
C329,C330,C331,C332	2203-006190	C-CERAMIC,CHIP
C333,C334,C335,C336	2203-006190	C-CERAMIC,CHIP
C505	2203-006208	C-CERAMIC,CHIP
C315,C316,C317,C349	2203-006260	C-CERAMIC,CHIP
C350	2203-006260	C-CERAMIC,CHIP
C214,C238,C239,C249	2203-006305	C-CERAMIC,CHIP
C367,C444	2203-006324	C-CERAMIC,CHIP
C570	2203-006348	C-CERAMIC,CHIP
C400	2203-006377	C-CERAMIC,CHIP
C410,C425,C426,C427	2203-006399	C-CERAMIC,CHIP
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C507,C508,C509,C519	2203-006399	C-CERAMIC,CHIP
C521,C523,C524,C525	2203-006399	C-CERAMIC,CHIP
C531,C533,C534,C539	2203-006399	C-CERAMIC,CHIP
C546	2203-006399	C-CERAMIC,CHIP
C110,C111,C112,C116	2203-006423	C-CERAMIC,CHIP
C124,C228,C229,C230	2203-006423	C-CERAMIC,CHIP
C240,C241,C340,C343	2203-006423	C-CERAMIC,CHIP
C248	2203-006462	C-CERAMIC,CHIP
C140,C362,C529,C530	2203-006562	C-CERAMIC,CHIP
C113,C115,C130,C132	2203-006611	C-CERAMIC,CHIP
C134,C135	2203-006611	C-CERAMIC,CHIP
C436,C437	2203-006648	C-CERAMIC,CHIP
C108,C109,C118,C119	2203-006681	C-CERAMIC,CHIP
C120,C123,C125,C126	2203-006681	C-CERAMIC,CHIP
C142,C166,C236,C246	2203-006681	C-CERAMIC,CHIP
C355,C476,C482,C501	2203-006681	C-CERAMIC,CHIP
C510	2203-006681	C-CERAMIC,CHIP
C131,C133	2203-006707	C-CERAMIC,CHIP
C160,C535	2203-006824	C-CERAMIC,CHIP
C121,C122	2203-006839	C-CERAMIC,CHIP
C361,C532	2203-006841	C-CERAMIC,CHIP
C161,C438,C439	2203-006844	C-CERAMIC,CHIP
C201,C207,C208,C209	2203-006872	C-CERAMIC,CHIP

Design LOC	SEC CODE	Description
C218,C235,C411,C412	2203-006872	C-CERAMIC,CHIP
C413,C430,C431	2203-006872	C-CERAMIC,CHIP
C448	2203-007133	C-CERAMIC,CHIP
C127,C129	2203-007194	C-CERAMIC,CHIP
C493,C494	2203-007230	C-CERAMIC,CHIP
C450,C452,C457,C459	2203-007240	C-CERAMIC,CHIP
C461,C467	2203-007240	C-CERAMIC,CHIP
C164,C167,C168,C321	2203-007271	C-CERAMIC,CHIP
C323,C337,C348,C404	2203-007271	C-CERAMIC,CHIP
C405,C416,C417,C419	2203-007271	C-CERAMIC,CHIP
C429,C432,C433,C434	2203-007271	C-CERAMIC,CHIP
C435,C441,C442,C443	2203-007271	C-CERAMIC,CHIP
C445,C446,C447,C455	2203-007271	C-CERAMIC,CHIP
C475,C479,C483,C484	2203-007271	C-CERAMIC,CHIP
C485,C486,C487,C488	2203-007271	C-CERAMIC,CHIP
C489,C566,C568	2203-007271	C-CERAMIC,CHIP
C511	2203-007279	C-CERAMIC,CHIP
C338,C418	2203-007385	C-CERAMIC,CHIP
C401,C402,C481	2203-007456	C-CERAMIC,CHIP
C159,C265,C279,C545	2203-007474	C-CERAMIC,CHIP
C522,C527	2203-007634	C-CERAMIC,CHIP
C491,C495,C514	2203-007701	C-CERAMIC,CHIP
C237,C242,C244,C245	2203-007775	C-CERAMIC,CHIP
C278	2203-007775	C-CERAMIC,CHIP
C165,C561	2203-007781	C-CERAMIC,CHIP
C421,C422,C424,C449	2203-007795	C-CERAMIC,CHIP
C451,C456,C458,C460	2203-007795	C-CERAMIC,CHIP
C465	2203-007795	C-CERAMIC,CHIP
C301,C303	2203-007840	C-CERAMIC,CHIP
C304,C306,C307,C322	2203-008095	C-CERAMIC,CHIP
L220	2703-001726	INDUCTOR-SMD
L207	2703-001938	INDUCTOR-SMD
L202	2703-002170	INDUCTOR-SMD
L119	2703-002281	INDUCTOR-SMD
L118,L510	2703-002308	INDUCTOR-SMD
L203,L403	2703-002314	INDUCTOR-SMD

Design LOC	SEC CODE	Description
L108	2703-002367	INDUCTOR-SMD
L109	2703-002369	INDUCTOR-SMD
L102,L106	2703-002858	INDUCTOR-SMD
L105,L107	2703-002953	INDUCTOR-SMD
L513	2703-003293	INDUCTOR-SMD
L113,L217,L402	2703-003686	INDUCTOR-SMD
L406,L410,L416	2703-003687	INDUCTOR-SMD
L400	2703-003754	INDUCTOR-SMD
L509	2703-003878	INDUCTOR-SMD
L401,L404,L408	2703-003911	INDUCTOR-SMD
L104	2703-003917	INDUCTOR-SMD
L215	2703-004032	INDUCTOR-SMD
L214	2703-004035	INDUCTOR-SMD
L412,L414	2703-004210	INDUCTOR-SMD
L112,L114	2703-004225	INDUCTOR-SMD
OSC400	2801-004551	CRYSTAL-UNIT
OSC201	2801-005105	CRYSTAL-UNIT
OSC100	2801-005113	CRYSTAL-UNIT
OSC200	2809-001371	OSCILLATOR-VCTCXO
F500,F501,F502,F503	2901-001673	FILTER-EMI SMD
F504,F505	2901-001673	FILTER-EMI SMD
F506,F507,F508,F509	2901-001677	FILTER-EMI SMD
F510,F511,F512	2901-001677	FILTER-EMI SMD
F200,F201	2904-002034	FILTER-SAW
MIC500	3003-001136	MIC-CONDENSOR
L216	3301-001438	CORE-FERRITE BEAD
L500,L501	3301-001534	CORE-FERRITE BEAD
L200,L212,L213	3301-001659	CORE-FERRITE BEAD
L504	3301-001729	CORE-FERRITE BEAD
L514,L515	3301-001756	CORE-FERRITE BEAD
L209,L210,L211	3301-001778	CORE-FERRITE BEAD
L110,L111	3301-001851	CORE-FERRITE BEAD
L417,L418	3301-001876	CORE-FERRITE BEAD
L505,L506,L507,L508	3301-001885	CORE-FERRITE BEAD
L511,L512	3301-001885	CORE-FERRITE BEAD
L201	3301-001929	CORE-FERRITE BEAD

Design LOC	SEC CODE	Description
L405,L407,L409,L411	3301-001986	CORE-FERRITE BEAD
L413,L415	3301-001986	CORE-FERRITE BEAD
L100,L101,L115,L116	3301-002058	CORE-FERRITE BEAD
L117	3301-002058	CORE-FERRITE BEAD
L502	3301-002063	CORE-FERRITE BEAD
TACT500,TACT501	3404-001410	SWITCH-TACT
TACT502	3404-001410	SWITCH-TACT
RFS100	3705-001731	CONNECTOR-COAXIAL
SLC500,SLC501	3708-002222	CONNECTOR-FPC/FFC/PIC
HDC501,U506	3711-007478	CONNECTOR-HEADER
HDC502	3711-008010	CONNECTOR-HEADER
ANT101,ANT102,ANT200	3712-001375	CONNECTOR
ANT201,SPK400,SPK401	3712-001375	CONNECTOR
F101	4709-002046	RF-MODULE
U301	1003-002468	IC
U404	1203-007187	IC
L503	2703-004357	INDUCTOR-SMD
F202	2909-001342	FILTER-DUPLEXER
LED400	GH59-11957A	
ZD501	0406-001487	DIODE-TVS
U505	1203-007197	IC
U402	1203-007288	IC
UCP300	1205-004495	IC
C226	2203-005716	C-CERAMIC,CHIP
F100	2911-000201	FILTER
SIM500	3709-001701	CONNECTOR-CARD EDGE
CD500	3709-001734	CONNECTOR-CARD EDGE
HDC500	3711-008114	CONNECTOR-HEADER
BTC500	3711-008143	CONNECTOR-HEADER
IFC500	3722-003490	JACK-PHONE
UME300	1107-002091	IC-FLASH MEMORY
UCP300_UP	NEW-01	IC
R503,R504,R509,R516	GH80-03320A	
R546	GH80-03320A	
R401,R534,R543,R552	GH80-03321A	

Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

7. Level 2 Repair

7-1. Disassembly and assembly Instructions

7-1-1. Disassembly

1

Carefully release the screws at 7 different locations



2

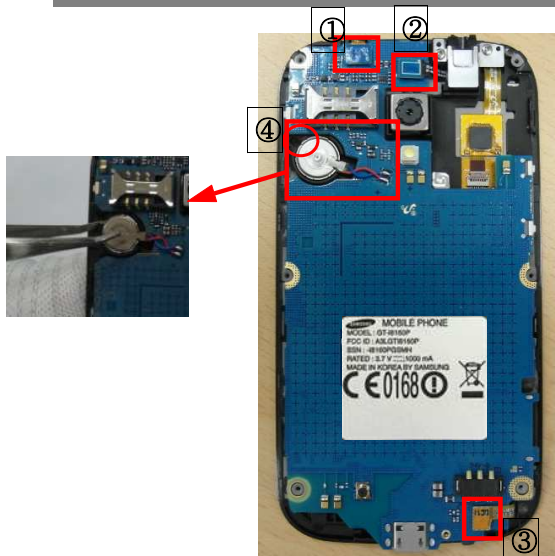
Disengage the rear cover with the front cover by using the hook



(Torque 0.1~0.5, '+' type)(Size: 1.4*3.5)

3

Separate the EJ, TSP, SUB KEY connector, MOTOR from the PBA.



4

Separate the LCD connector from the PBA.



Be careful not to damage the Wire

Be careful not to damage chip crack

7-1-2. assemble

1 Attach the LCD connector



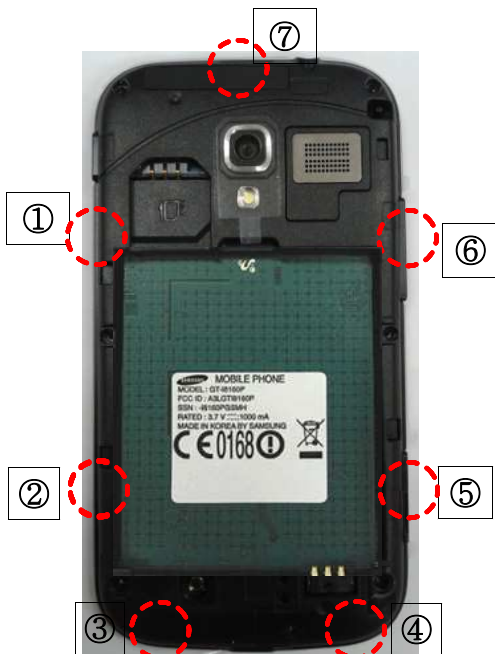
Be careful not to damage chip crack

2 Attach the TSP, E/J, SUB KEY connector, MOTOR



Twist MOTOR WIRE, twice

3 Joint the Rear and the Front



Hook at the 7 points

4 Screws at 7 points

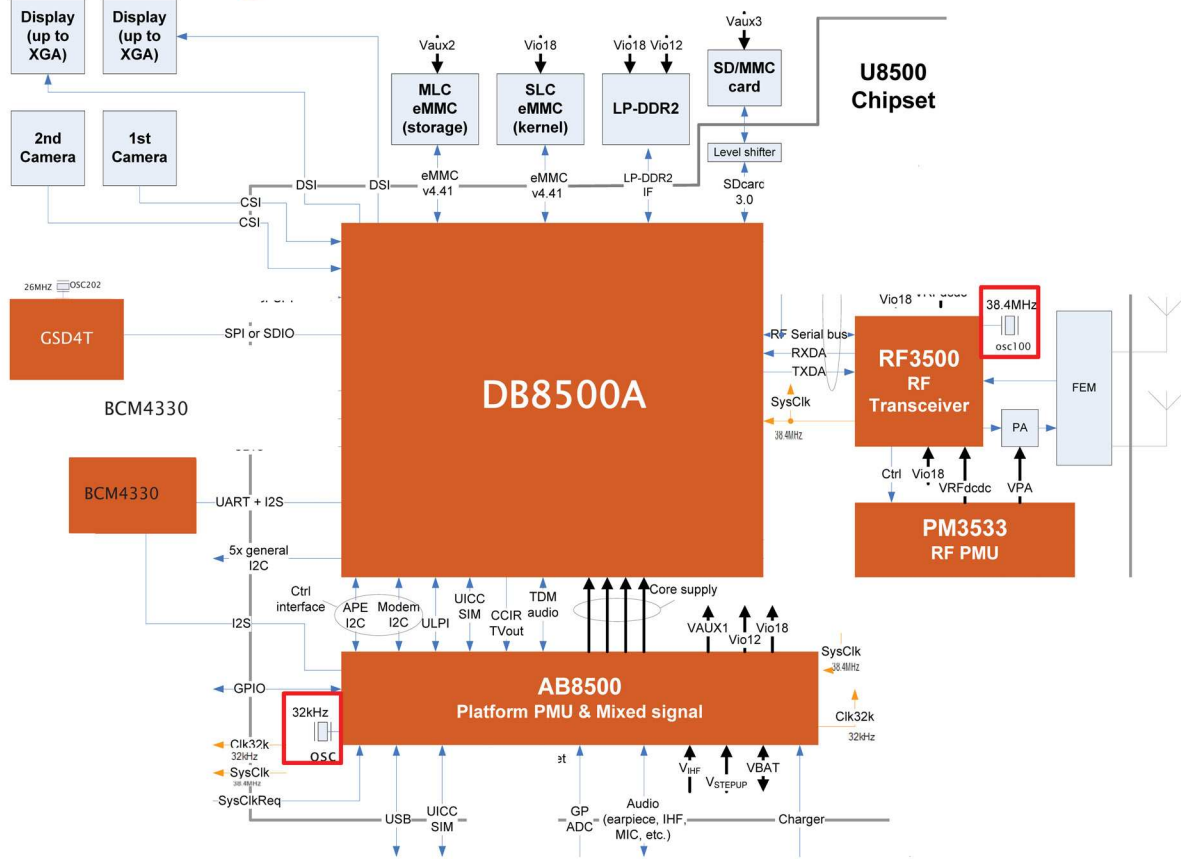


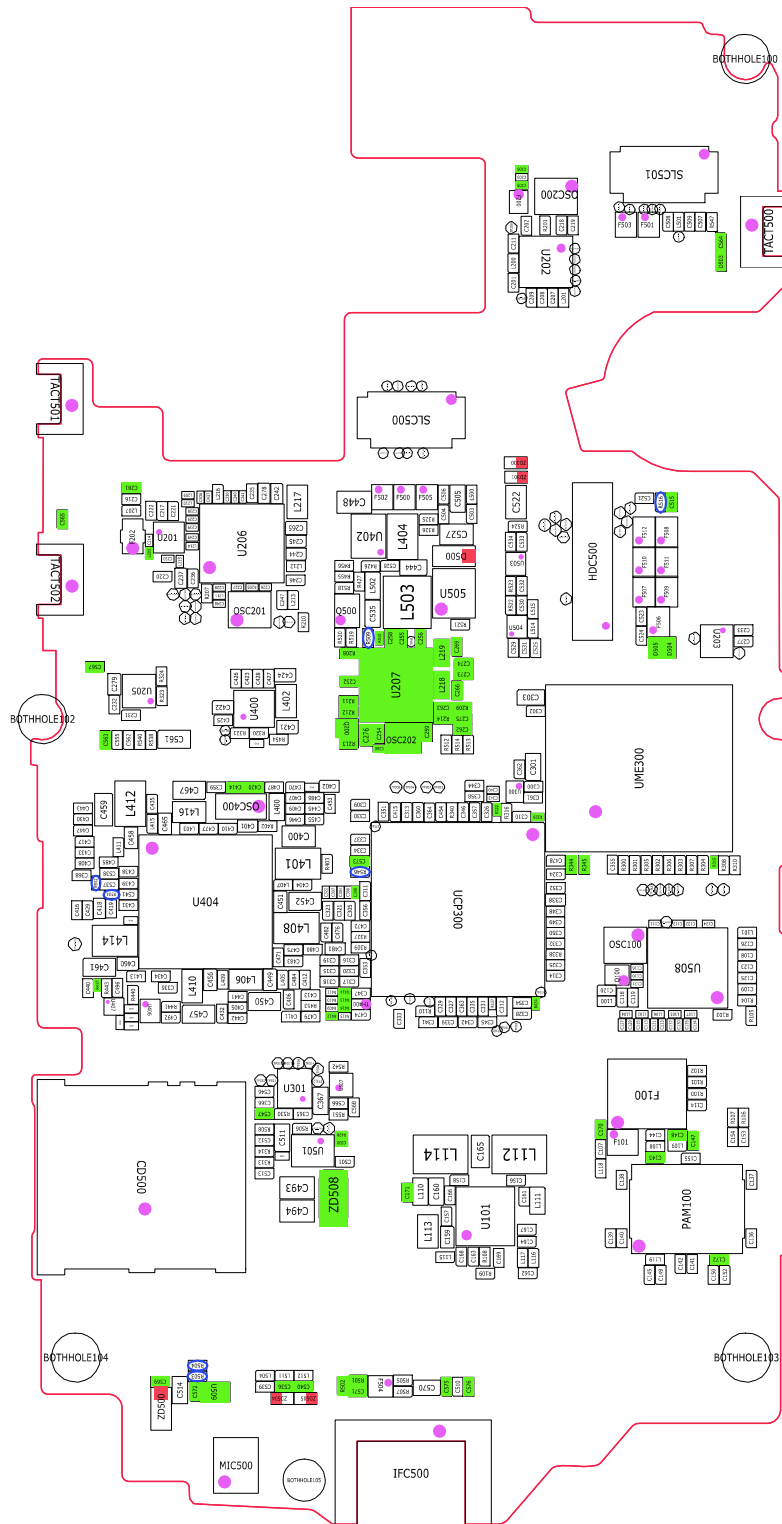
(Torque 0.1~0.5, '+' type)(Size: 1.4*3.5)

8. Level 3 Repair

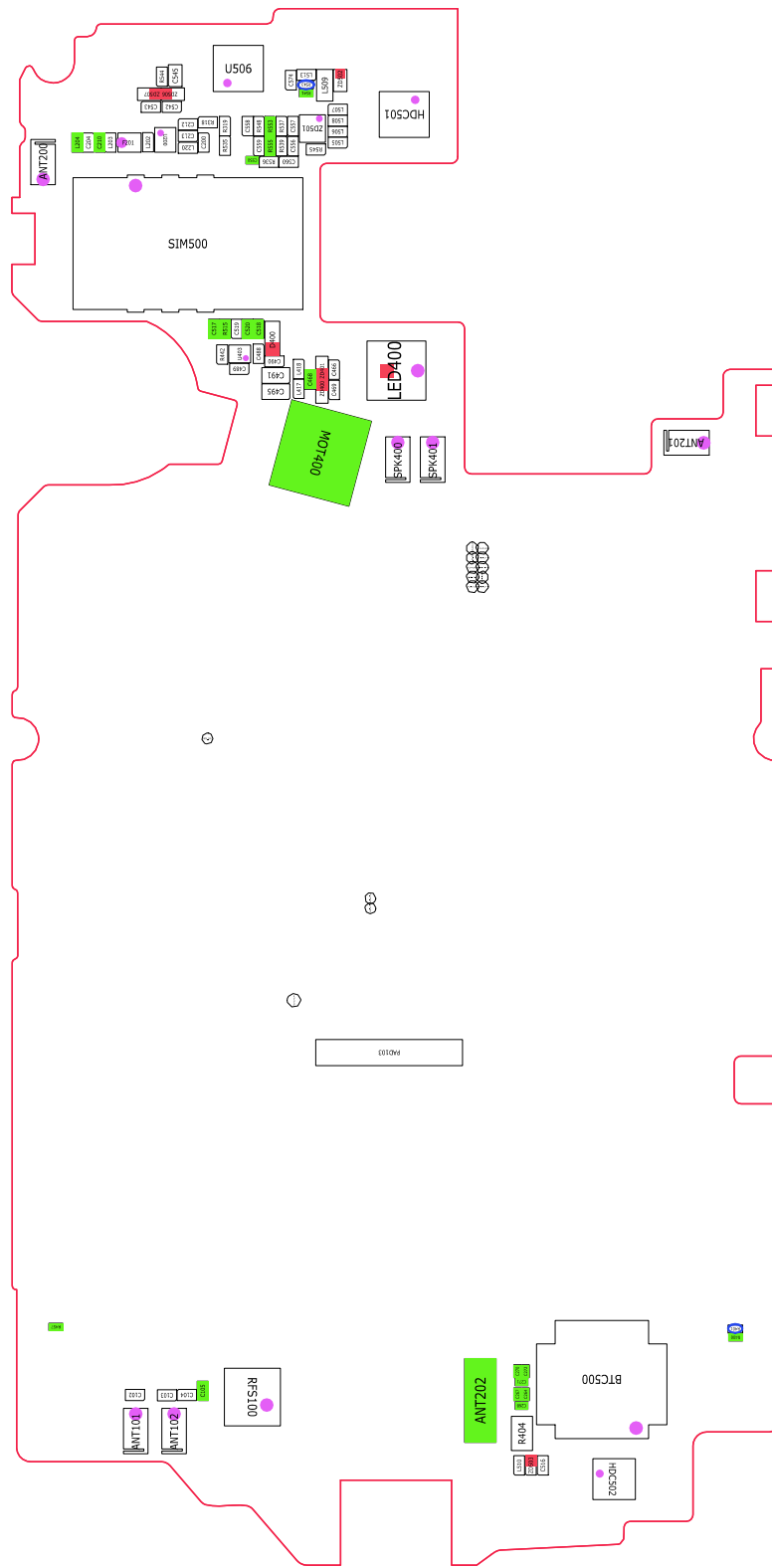
8-1. Block Diagram

Block Diagram



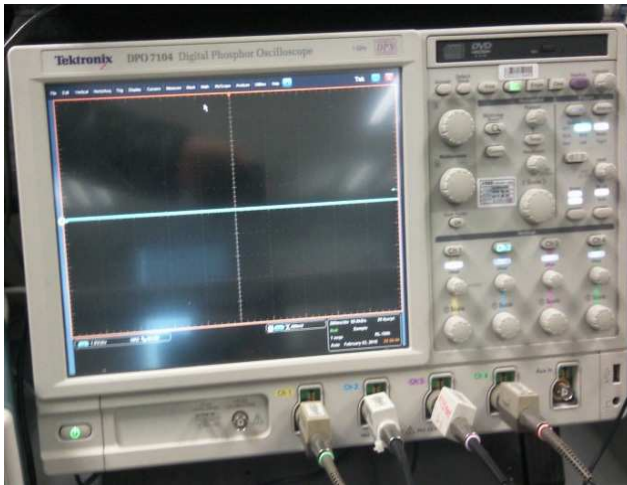


8-2-2. Bottom



8-3. Flow Chart of Troubleshooting

Equipments



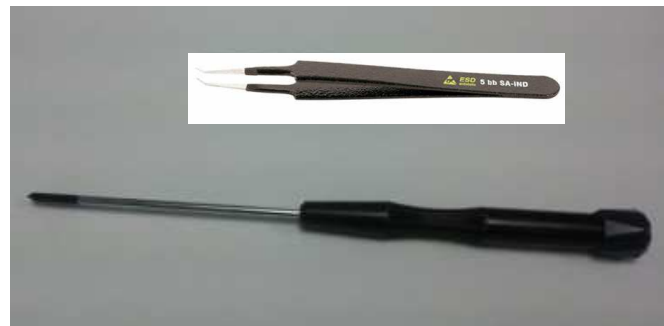
↑ Oscilloscope



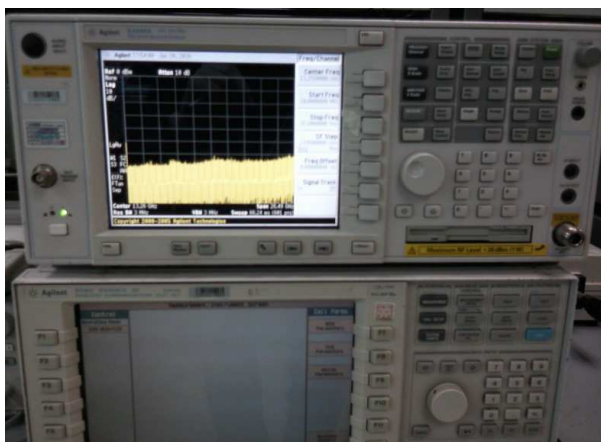
↑ Digital Multi-meter



↑ Power Supply



↑ + driver, ESD Safe Tweezer

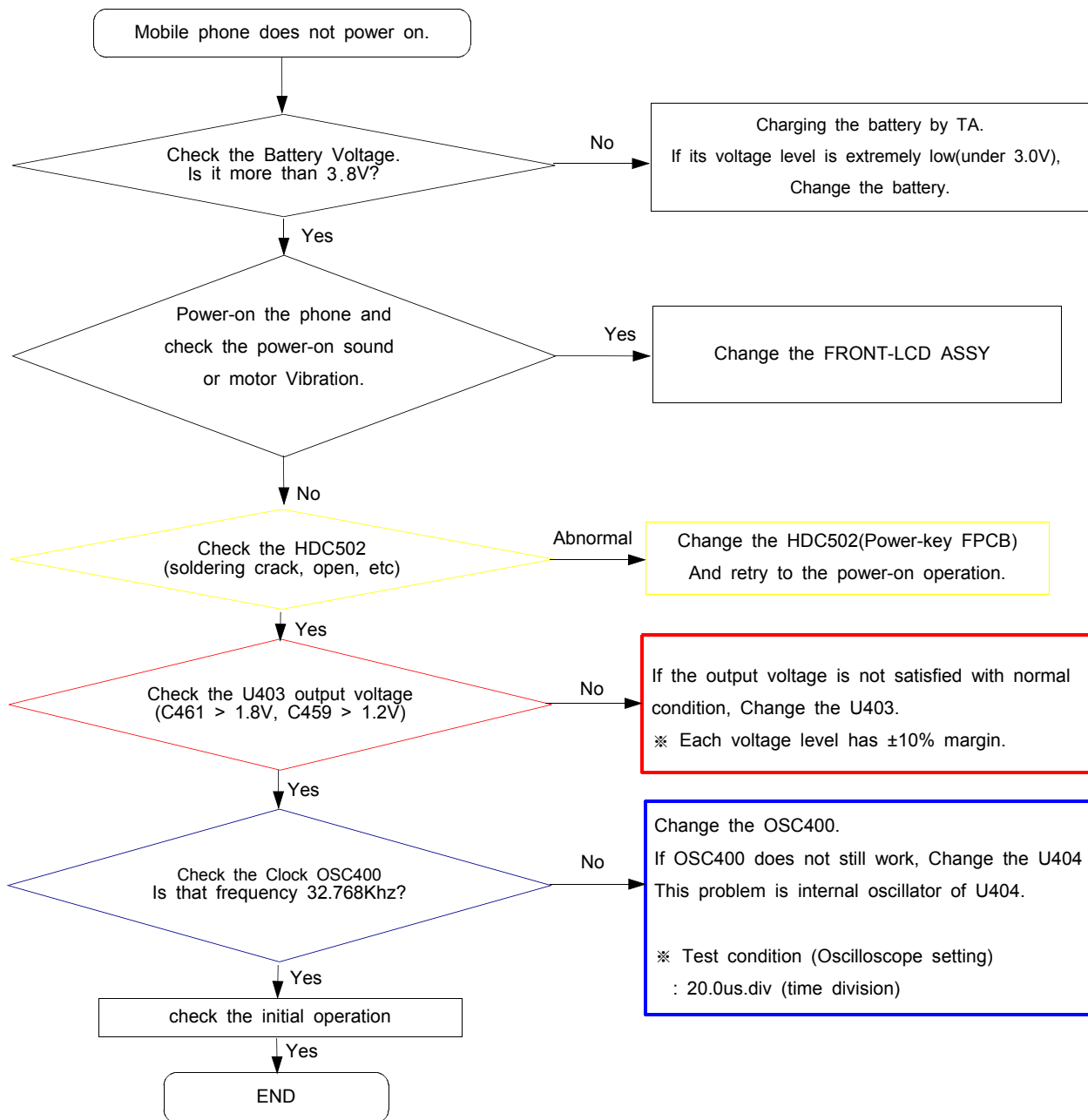


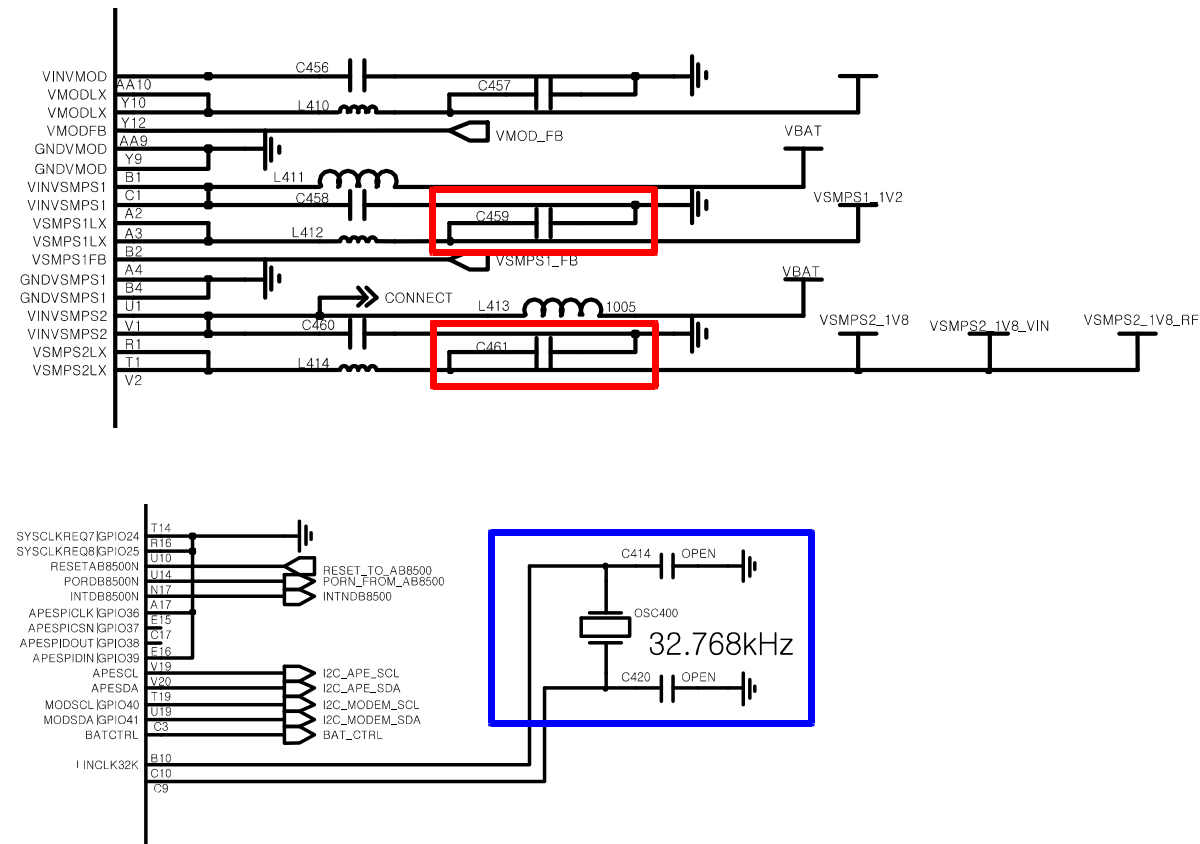
↑ 8960 & Spectrum Analyzer



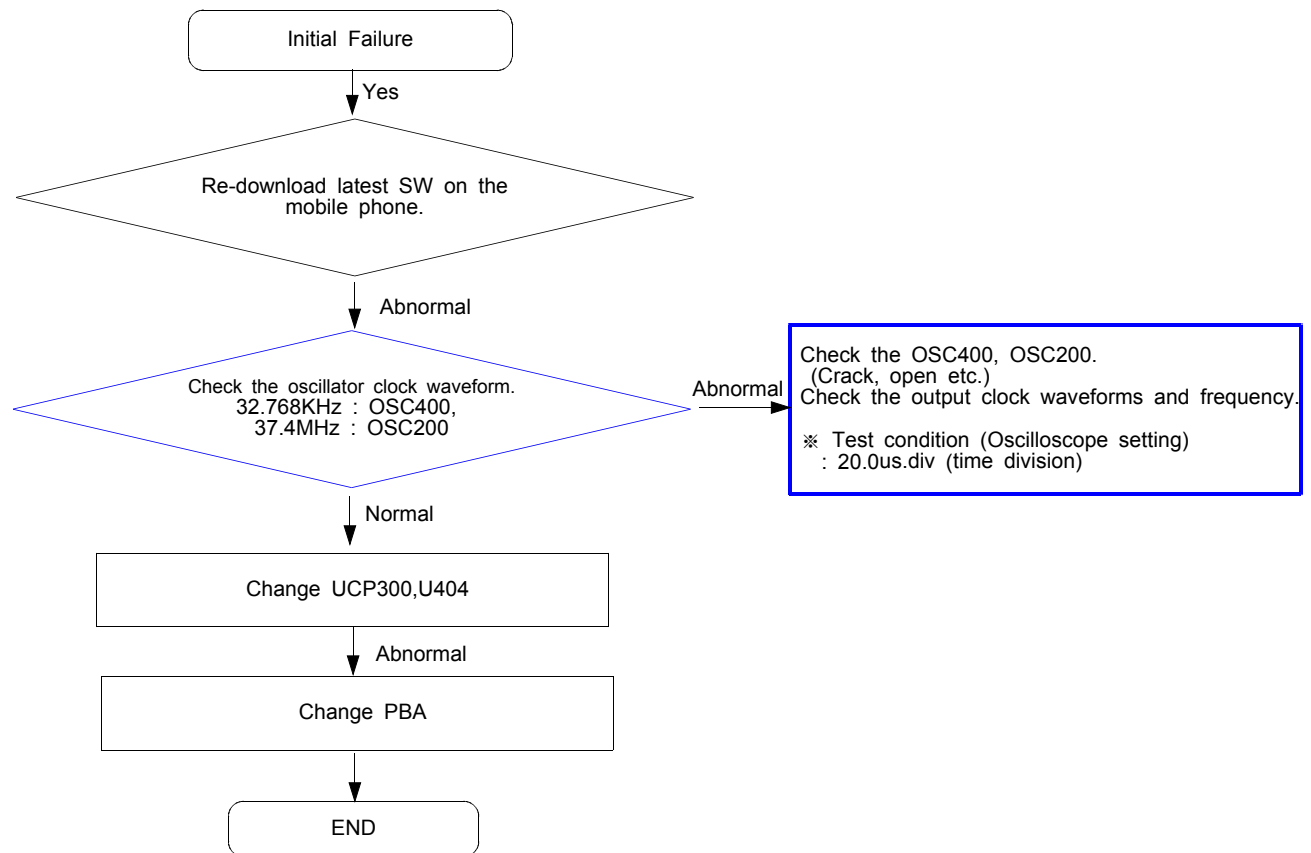
↑ Soldering iron

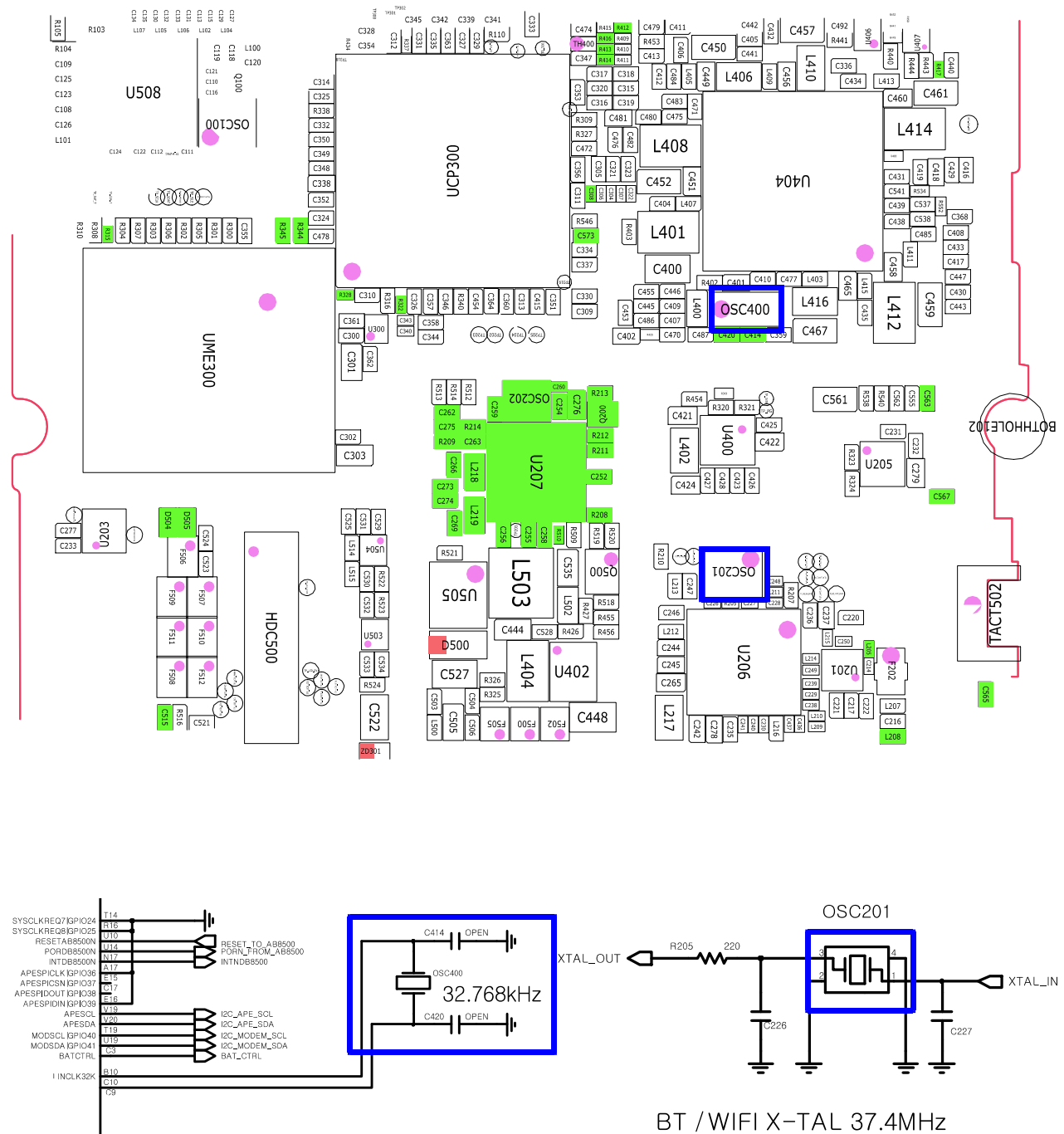
8-3-1. Power On



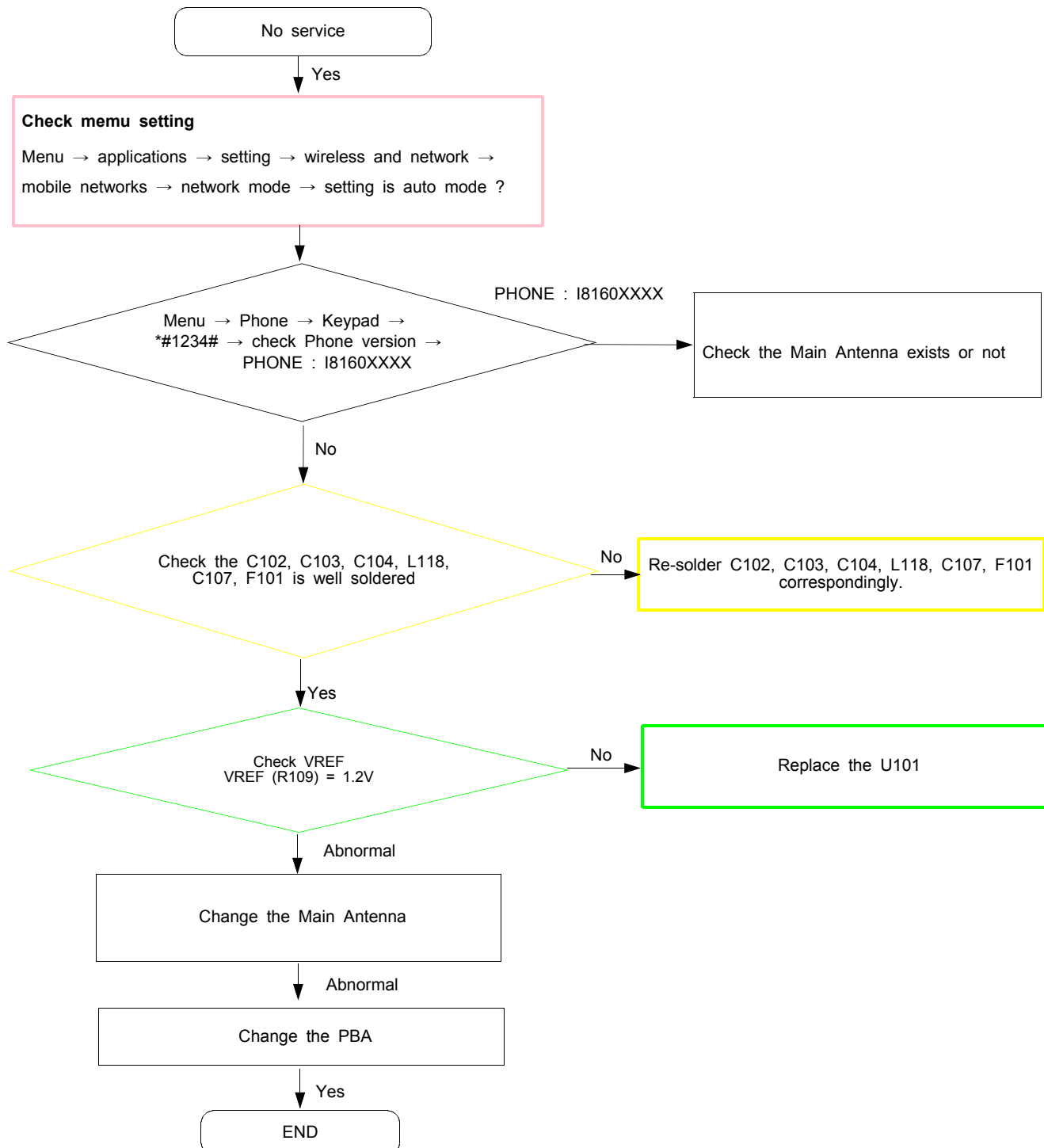


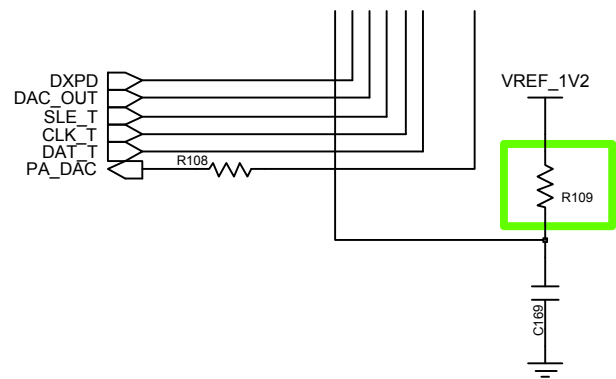
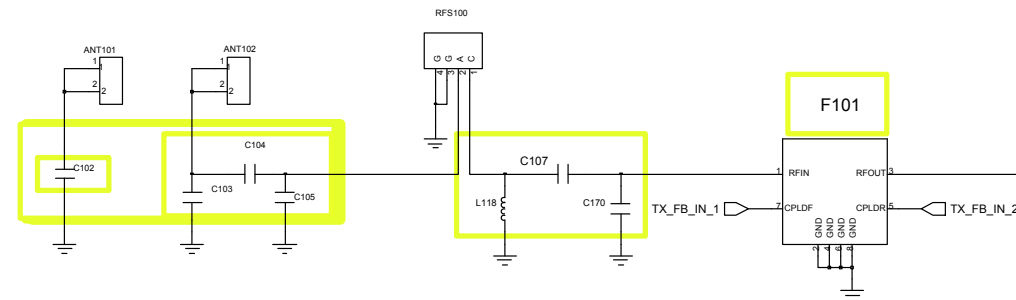
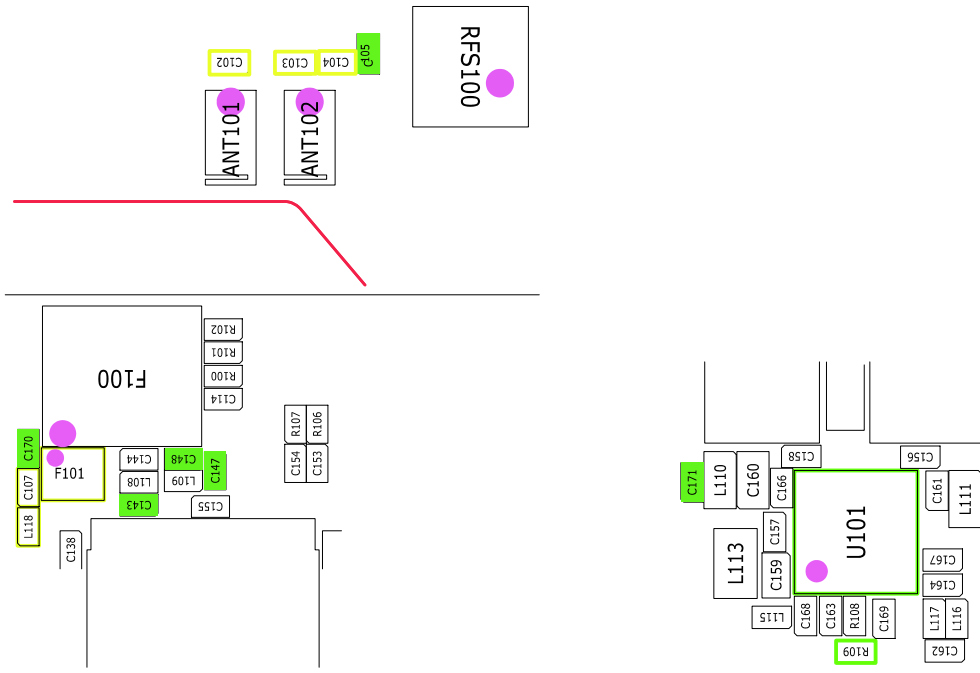
8-3-2. Initial



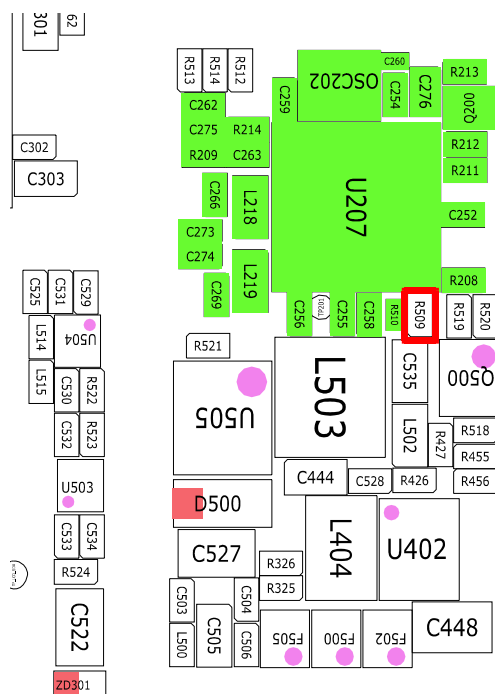
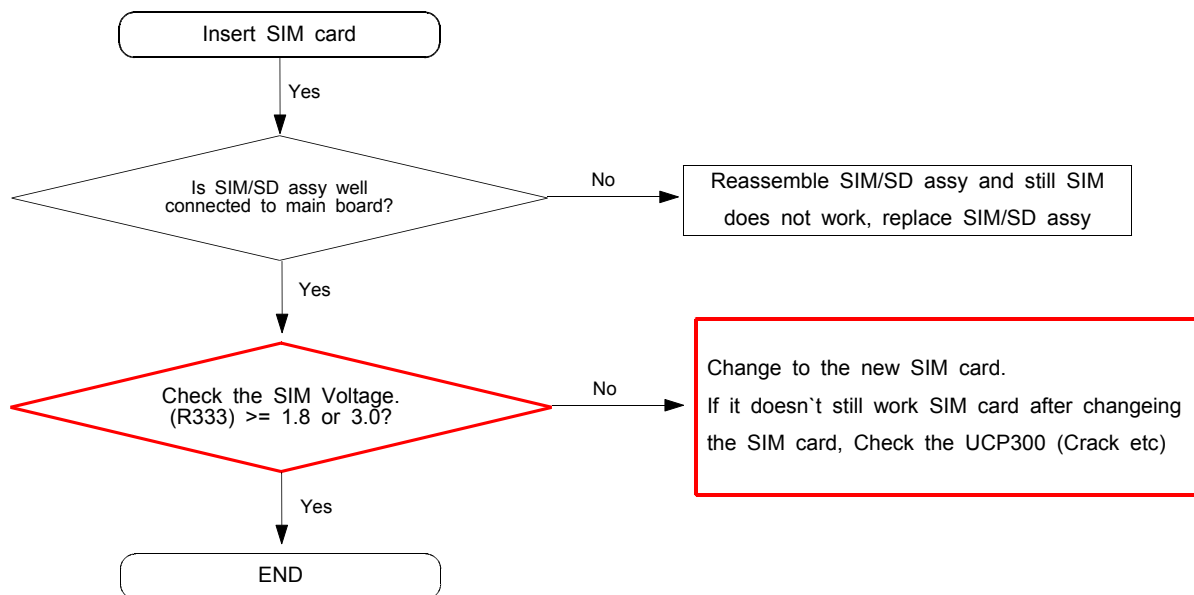


8-3-3. No Service

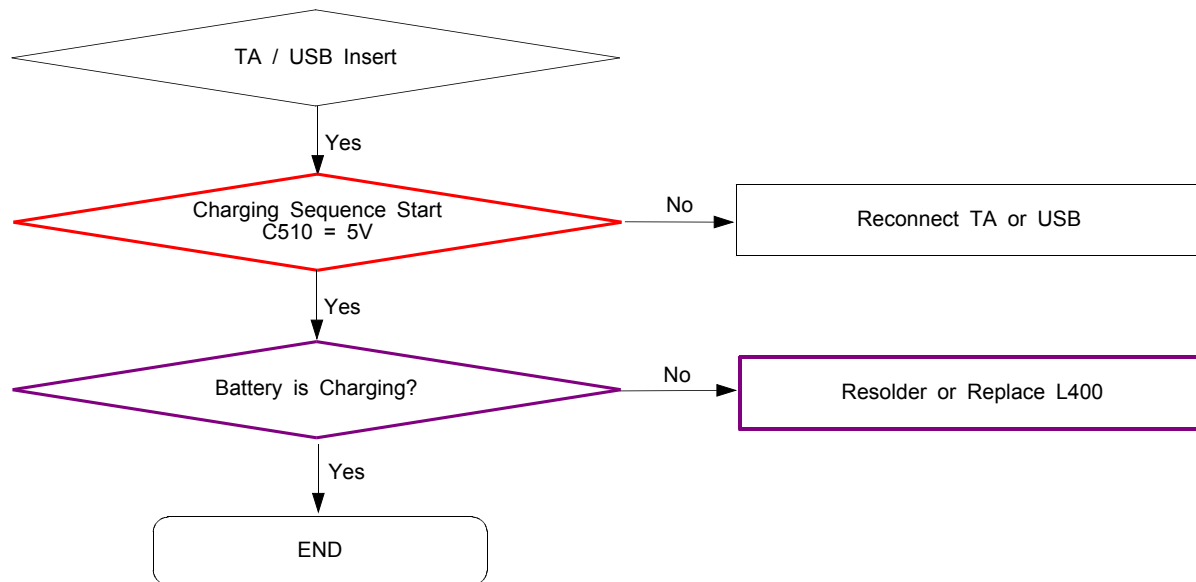


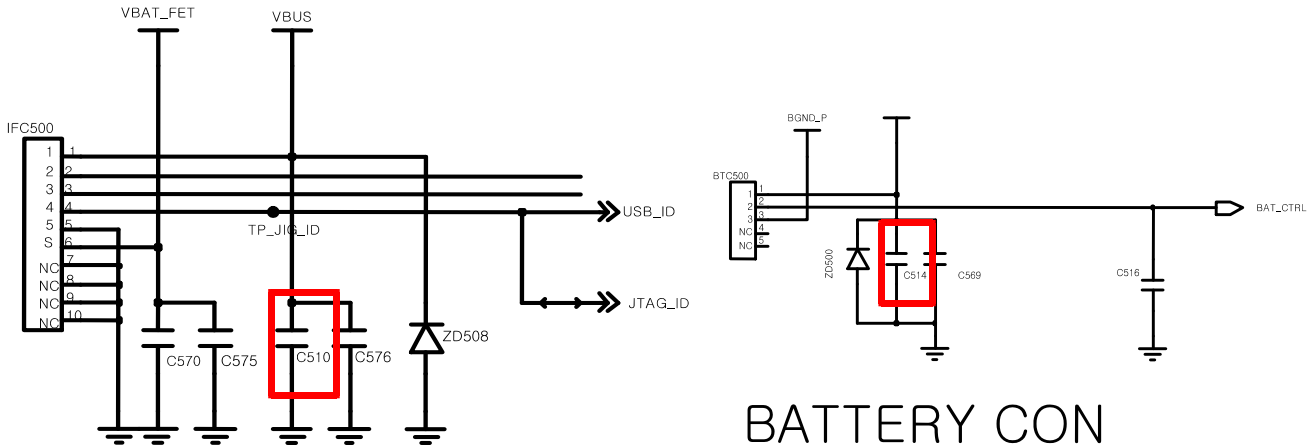


8-3-4. Sim Part

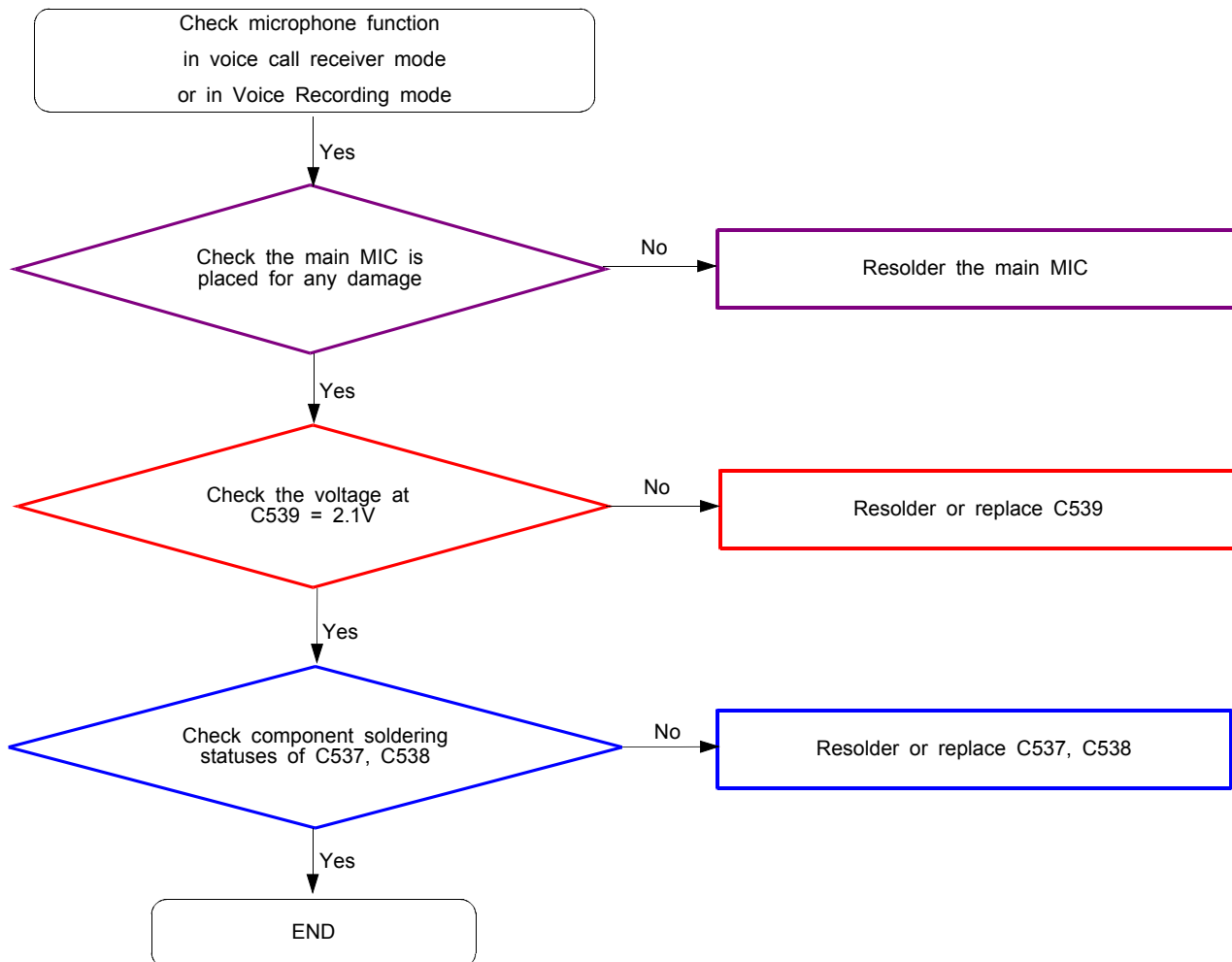


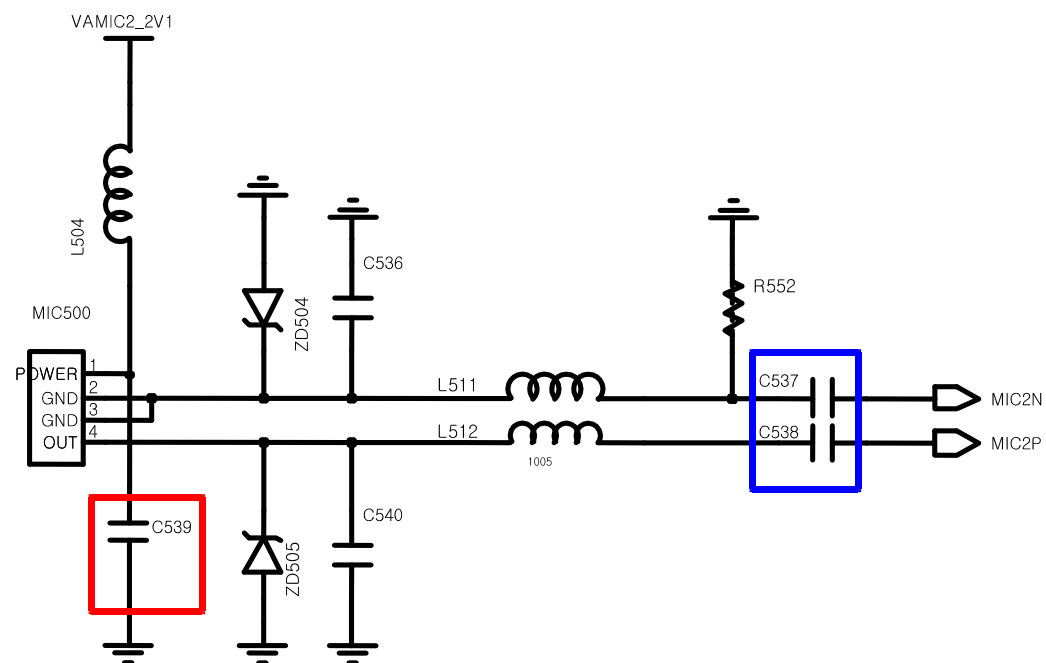
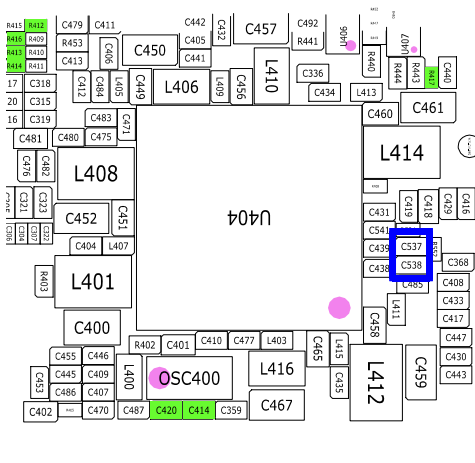
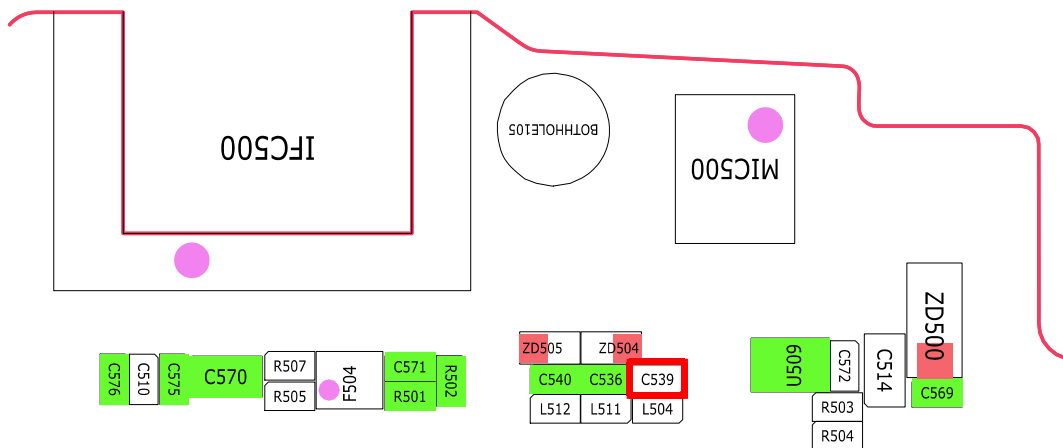
8-3-5. Charging Part



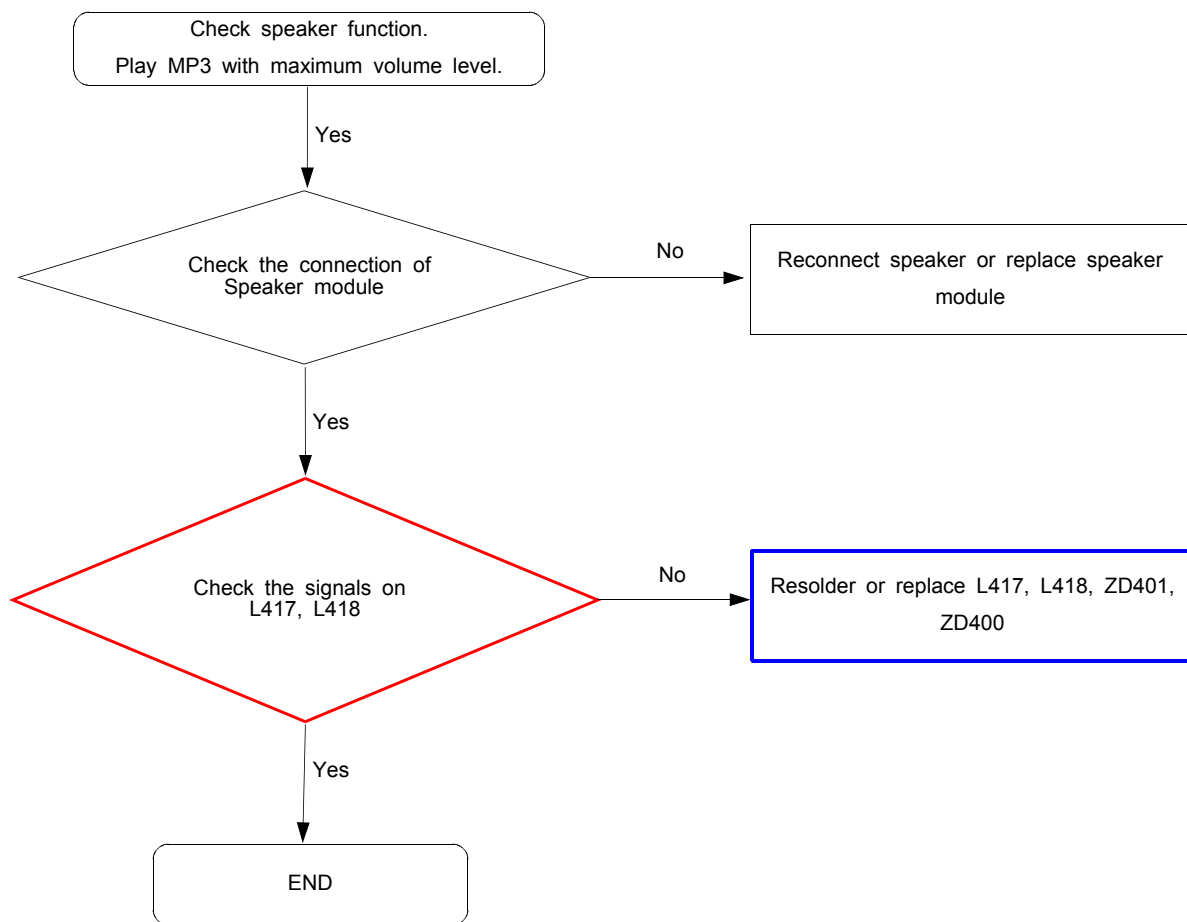


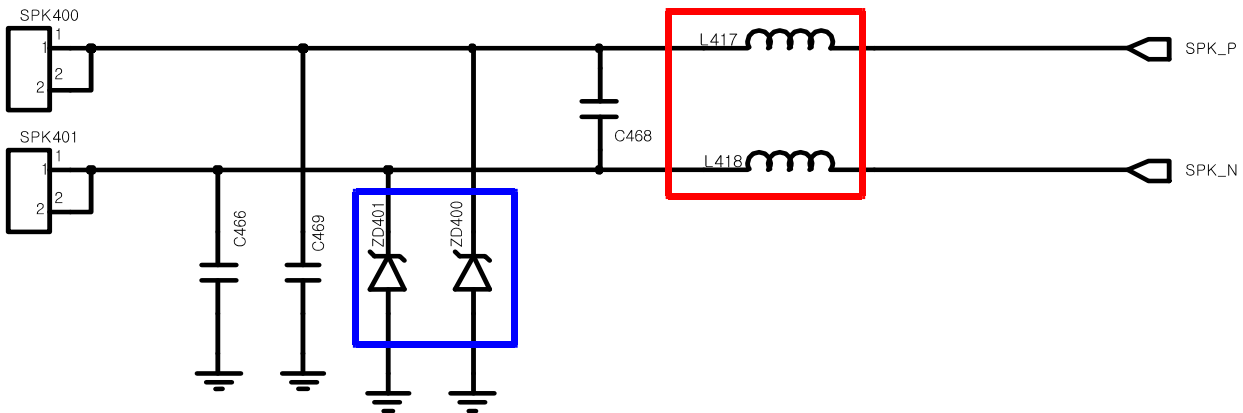
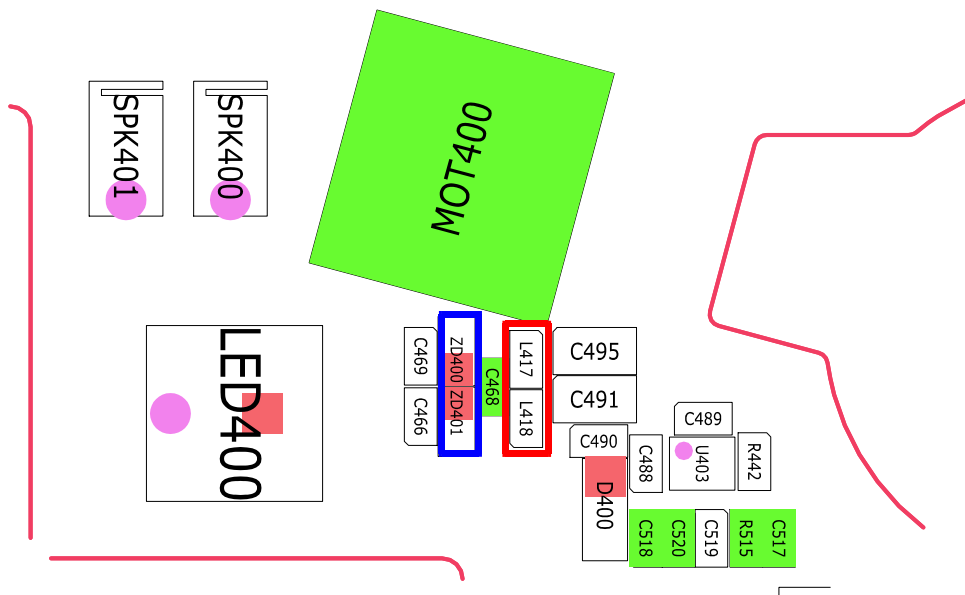
8-3-6. Microphone Part



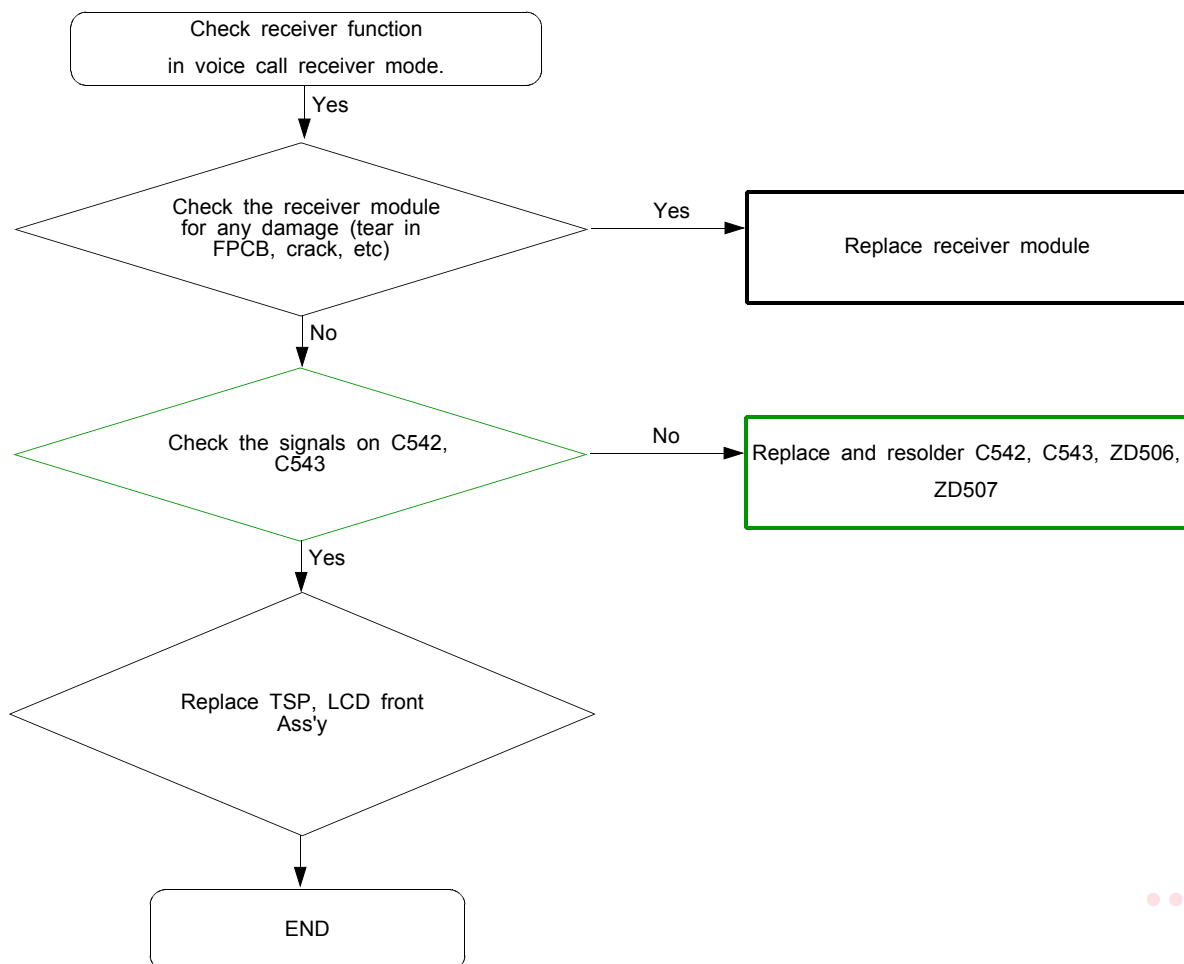


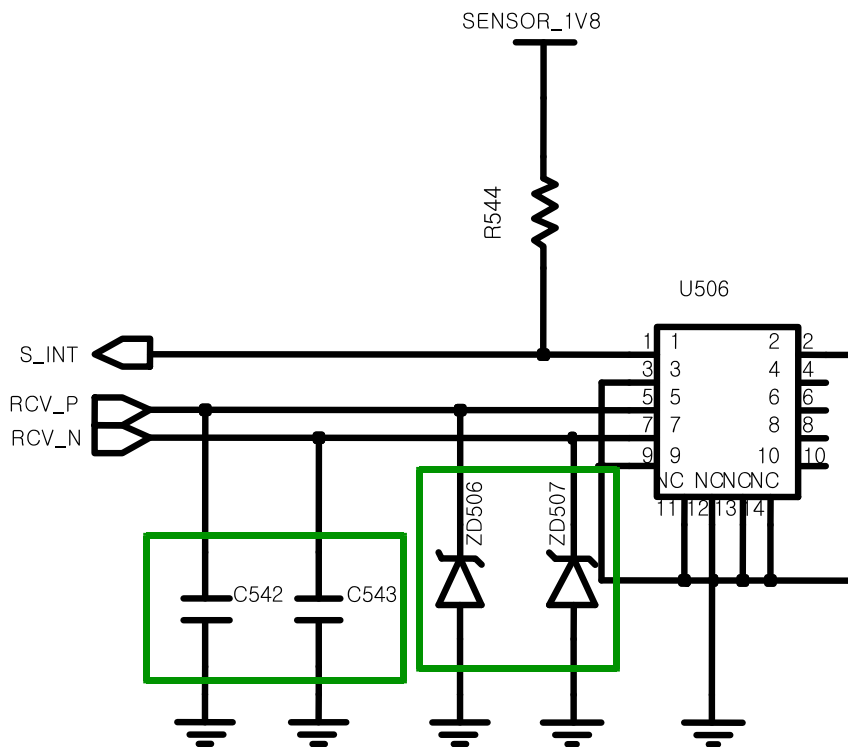
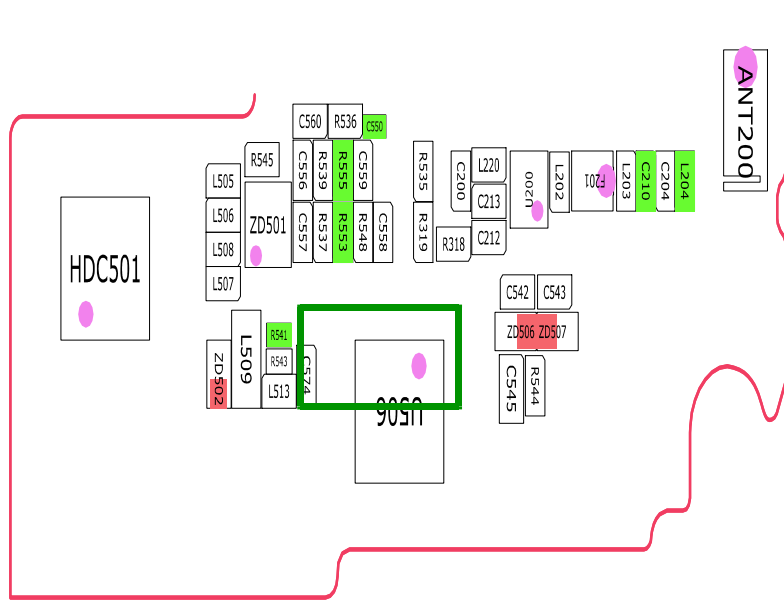
8-3-7. Speaker Part



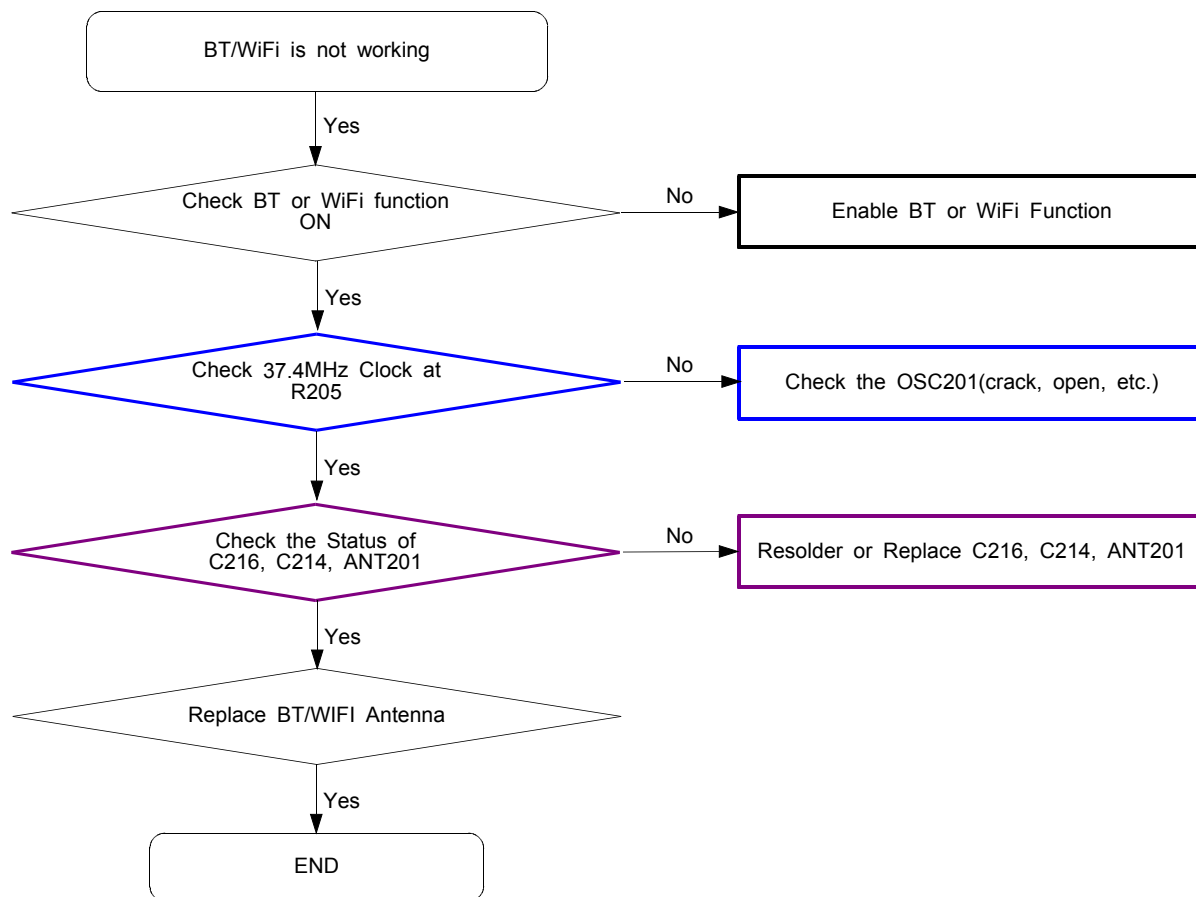


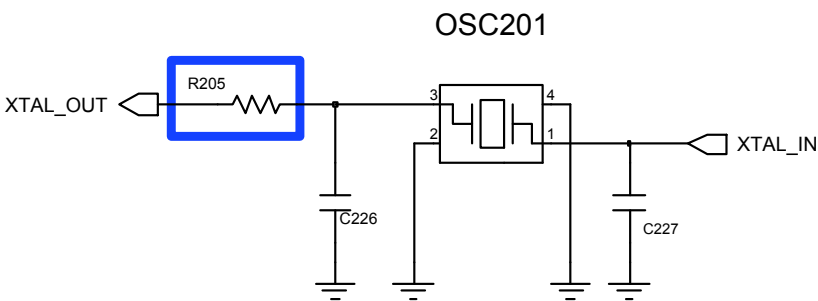
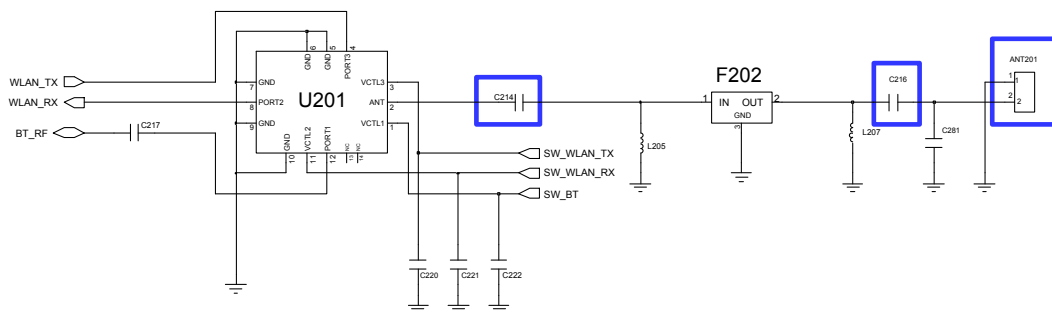
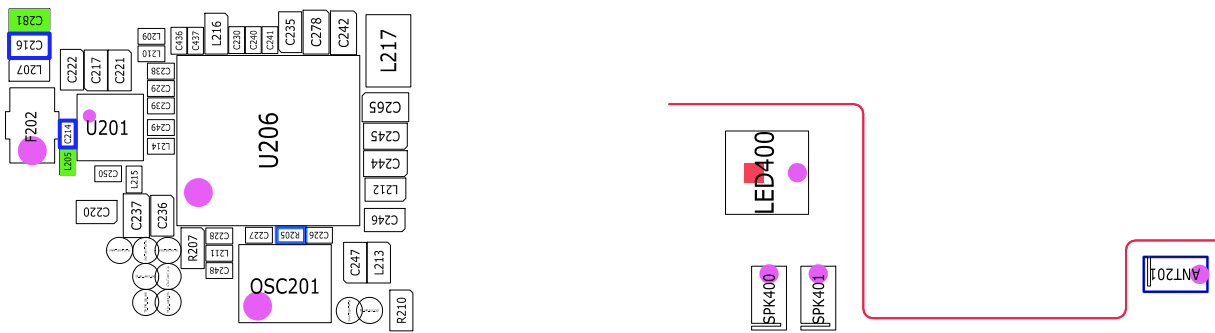
8-3-8 Receiver Part



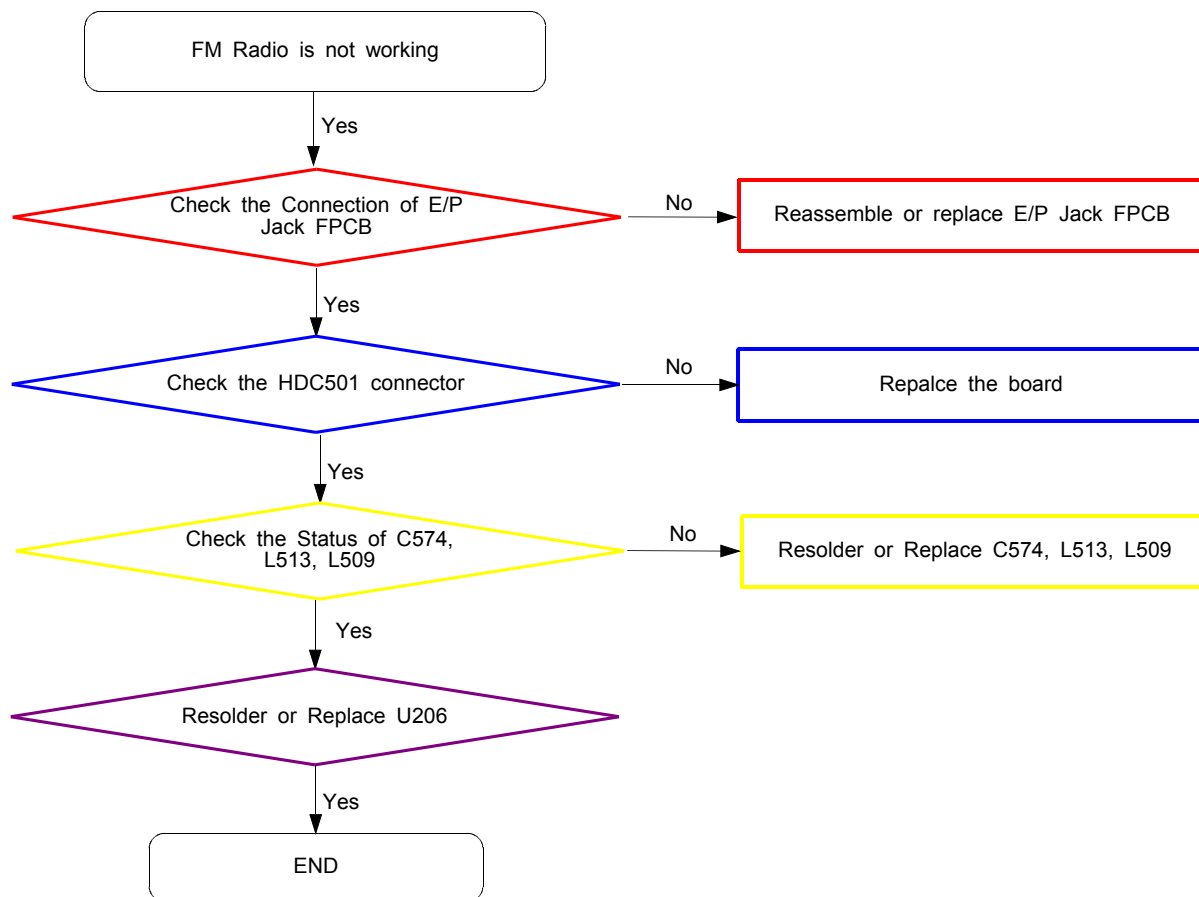


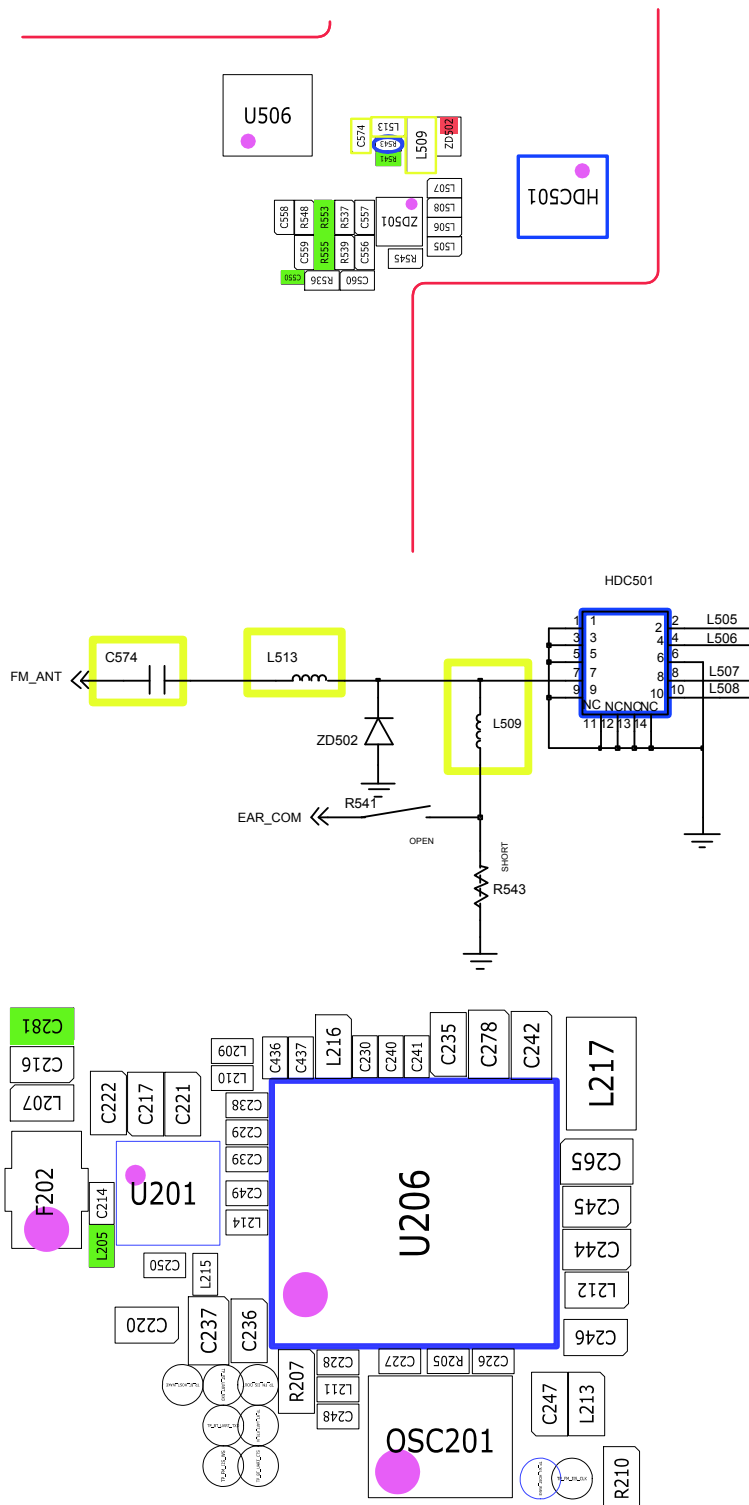
8-3-9. BT/WIFI



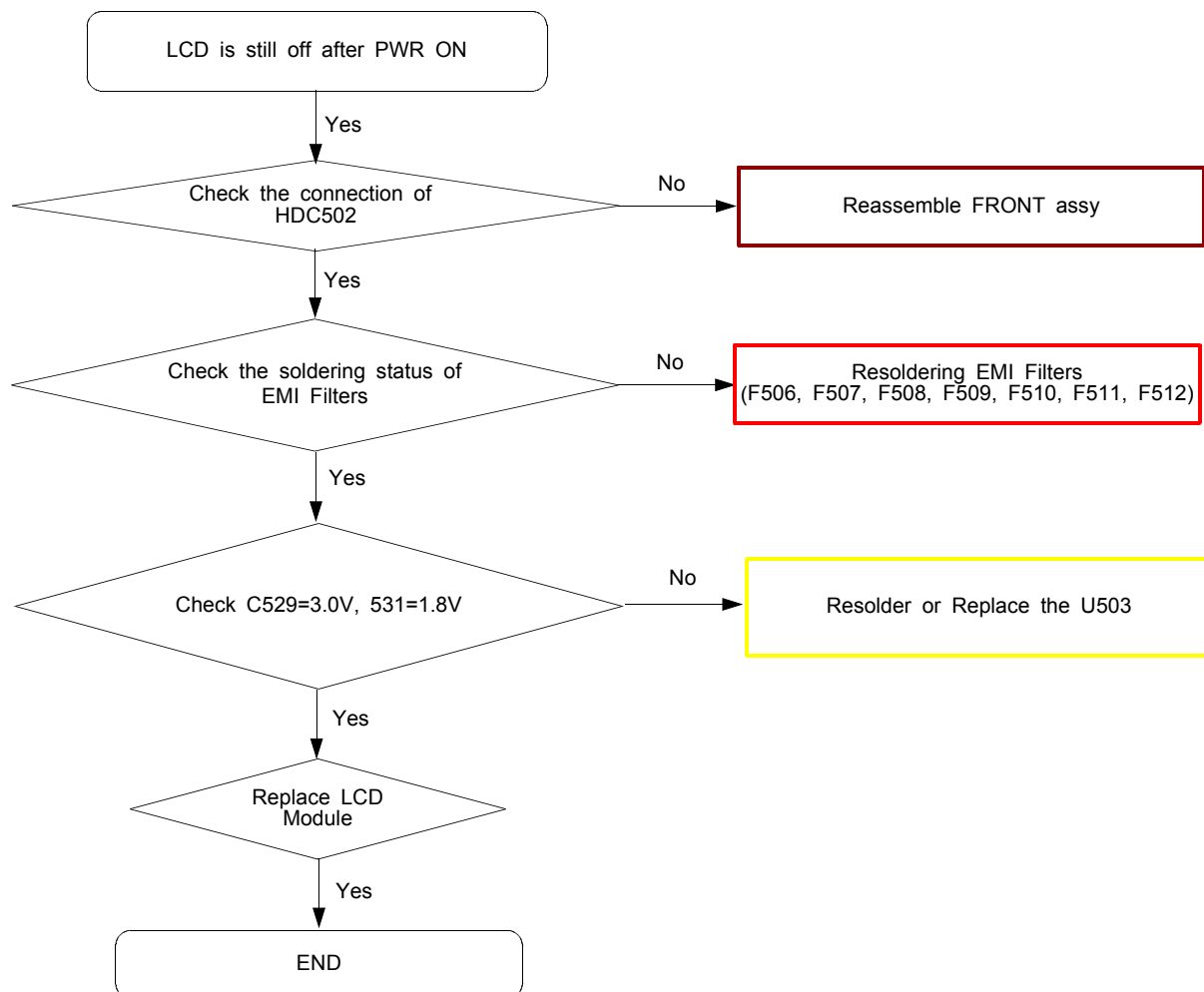


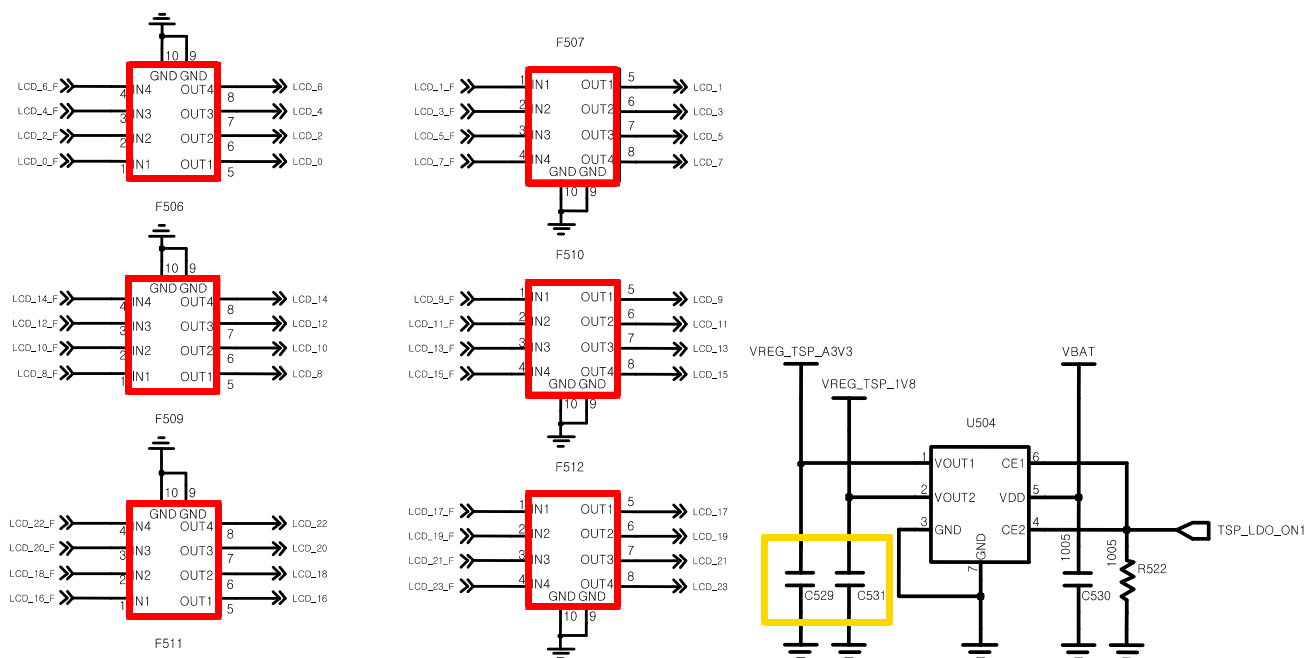
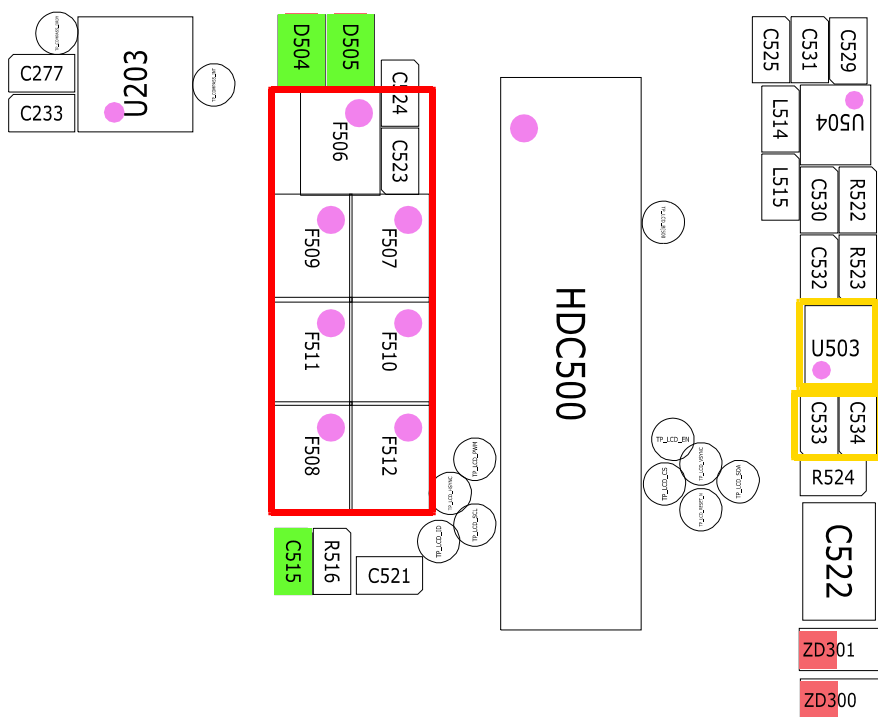
8-3-10. FM RADIO



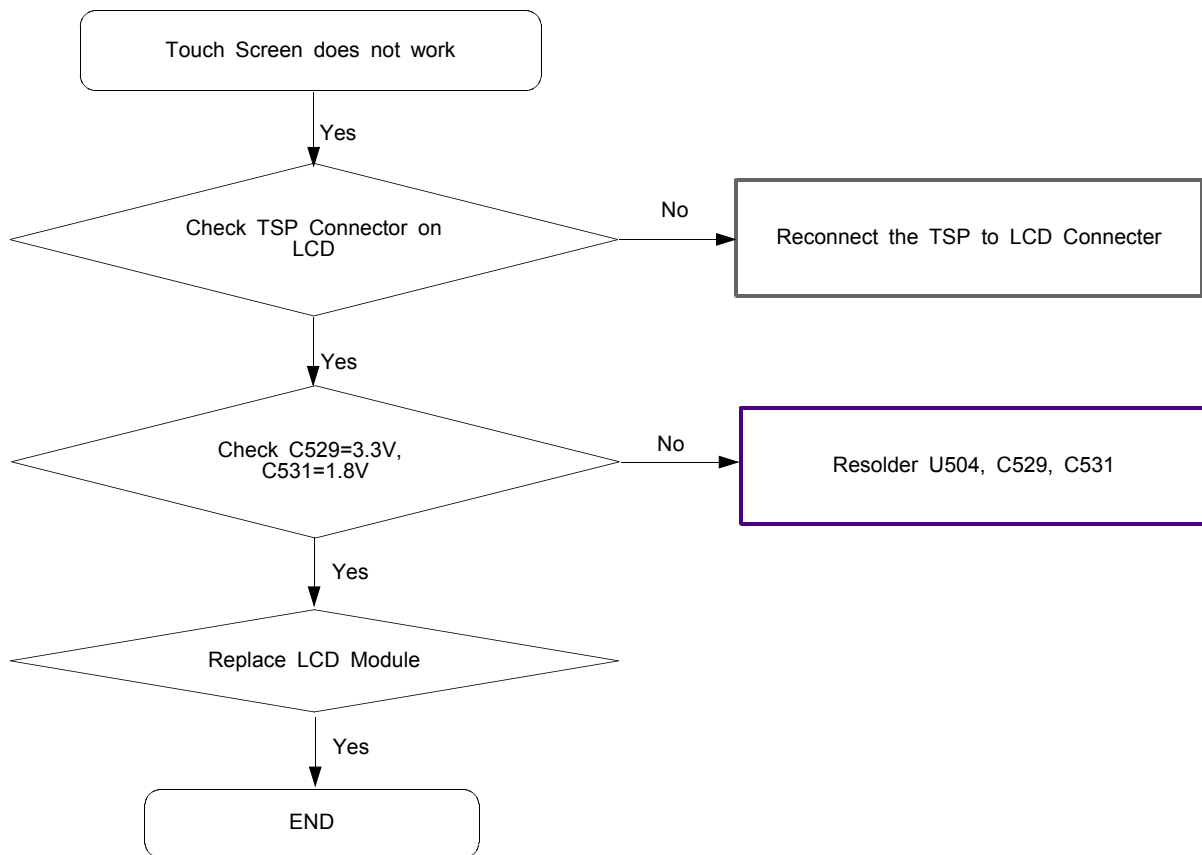


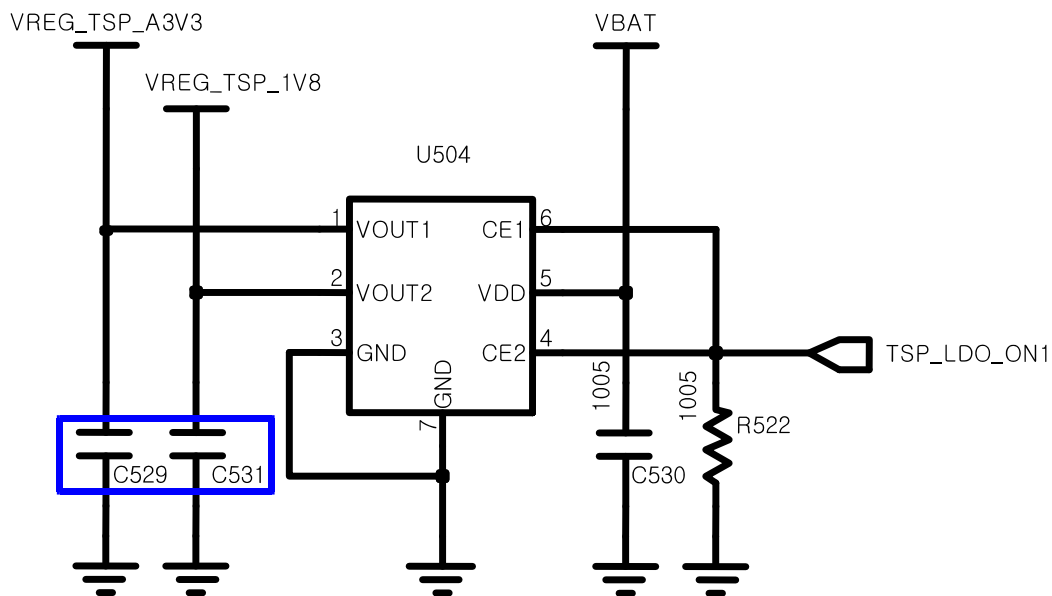
8-3-11. LCD



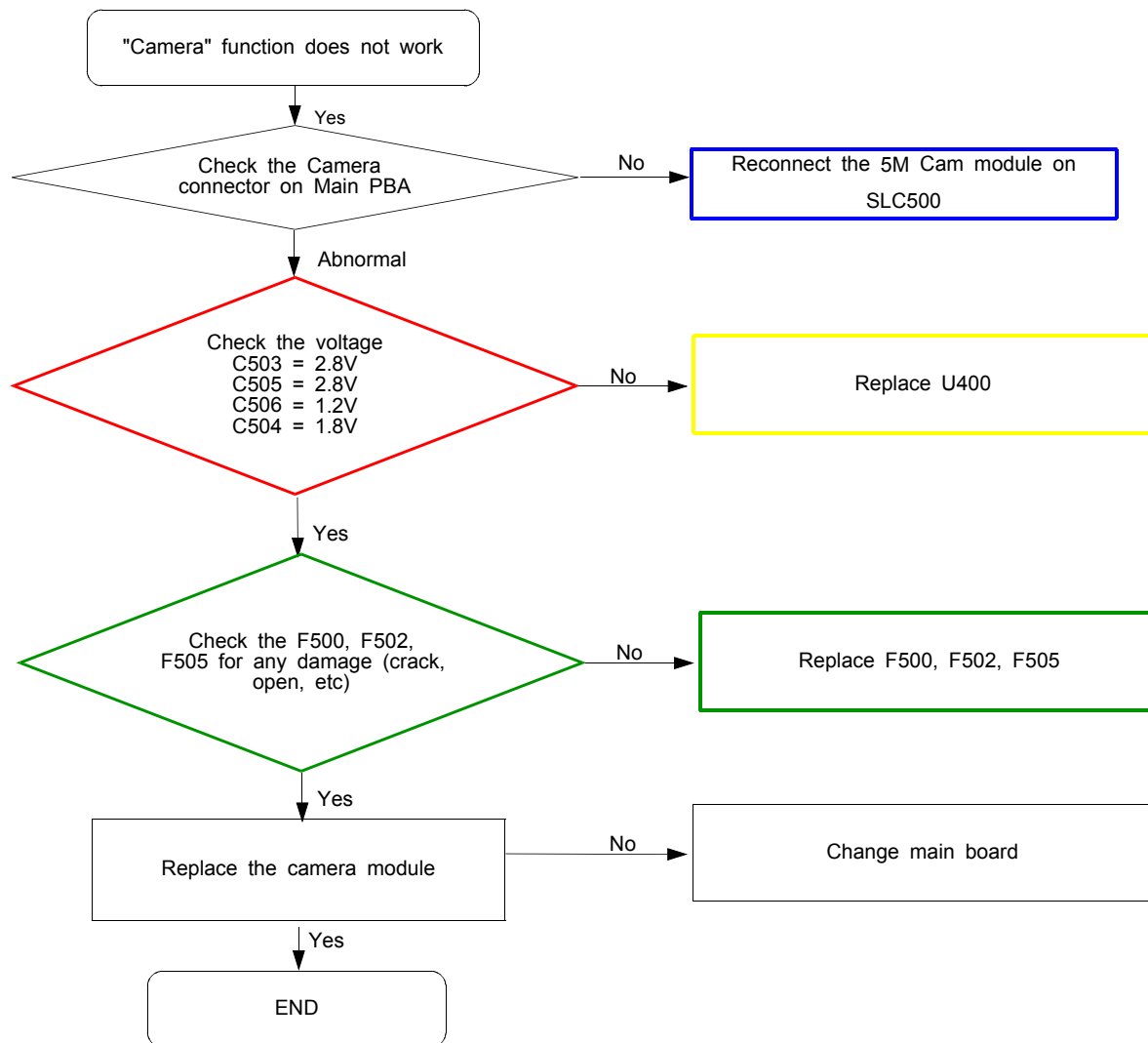


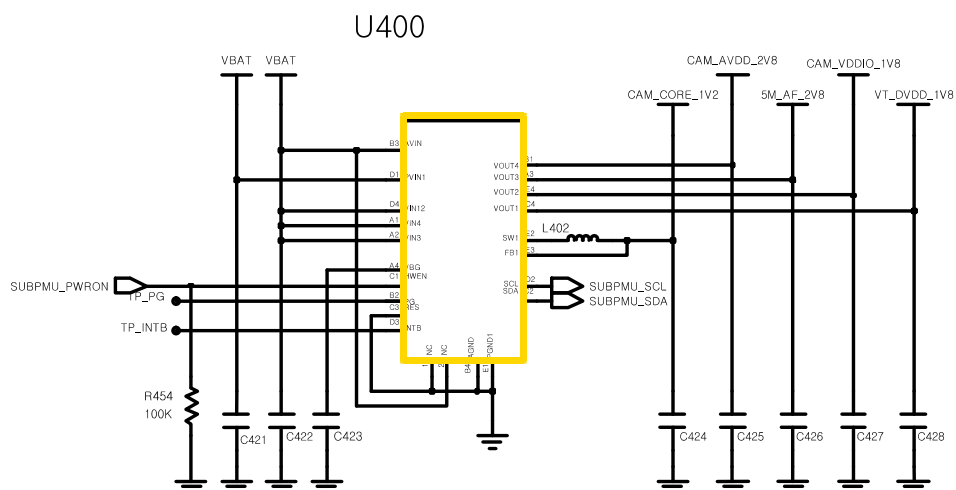
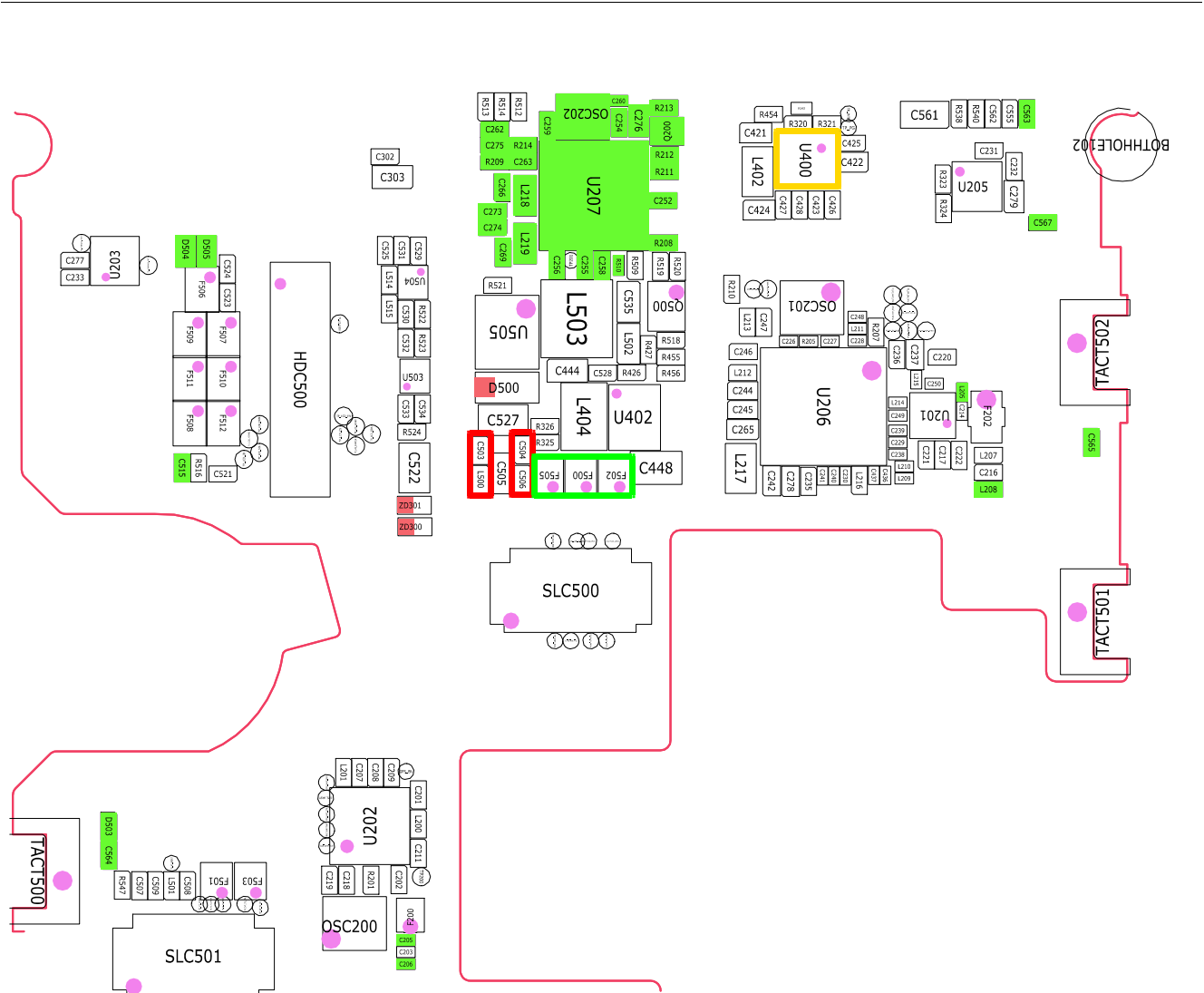
8-3-12. TSP

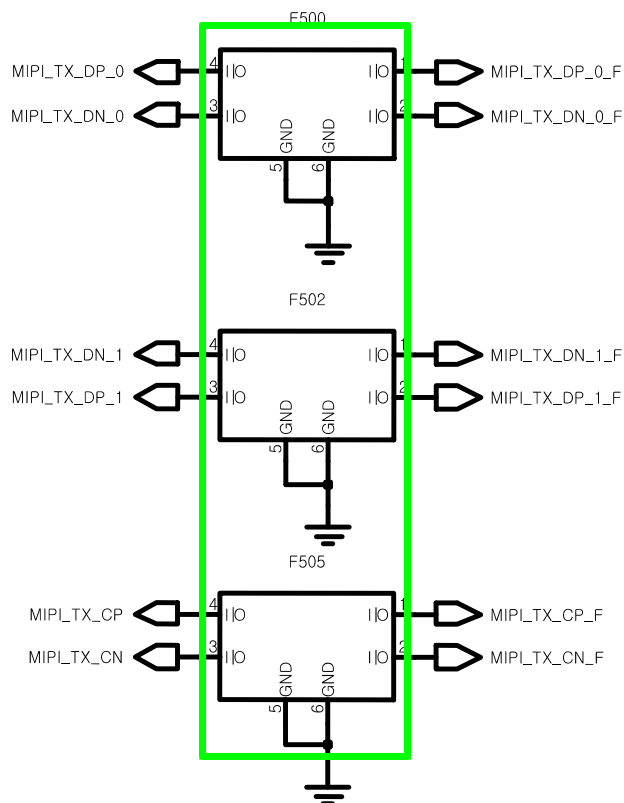
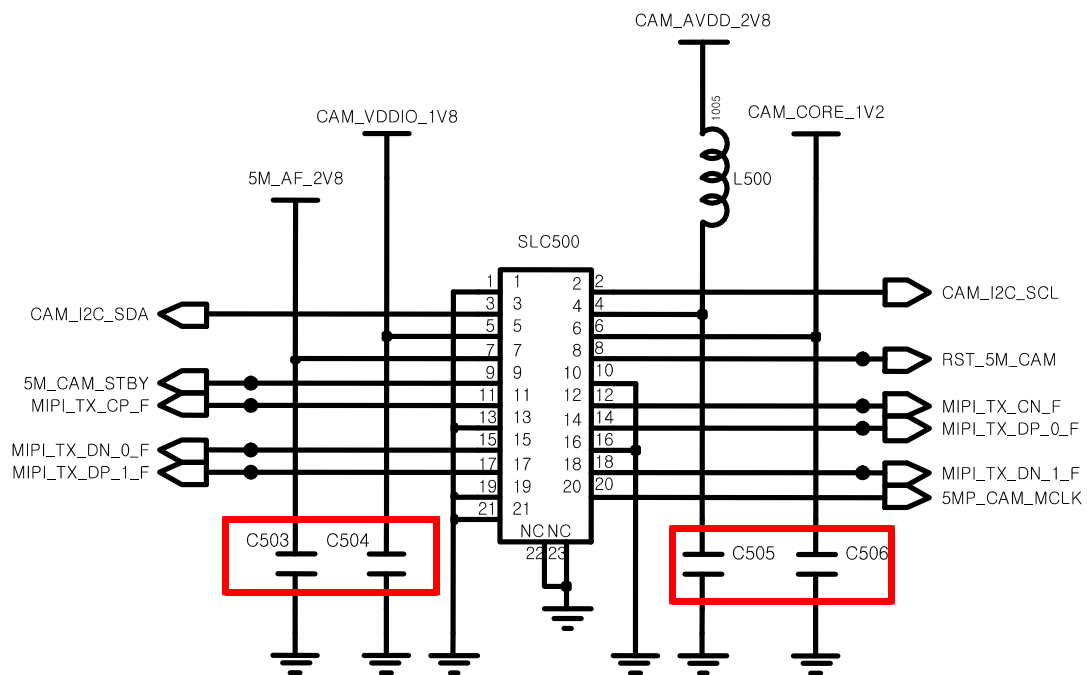




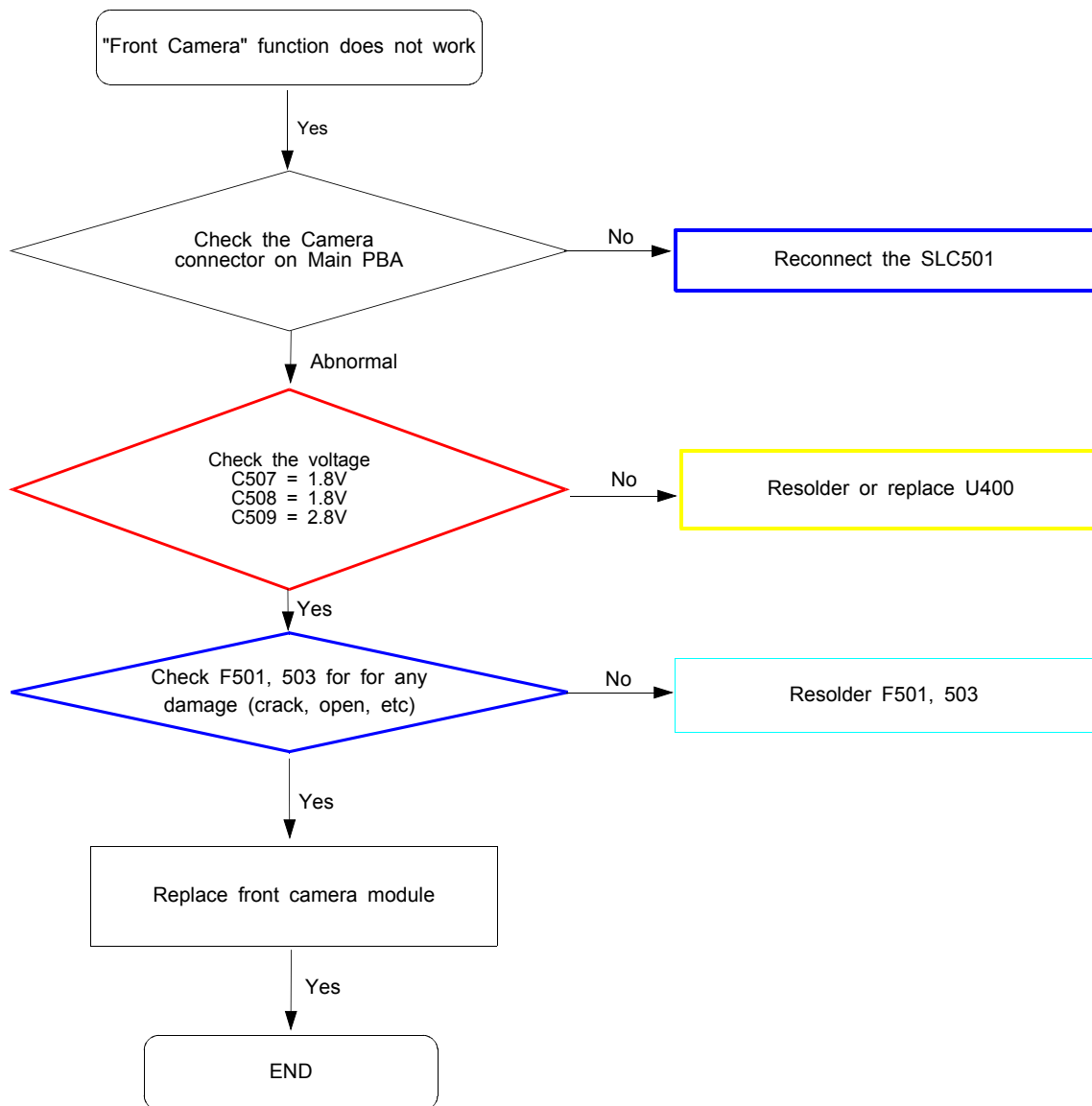
8-3-13. 5M CAM

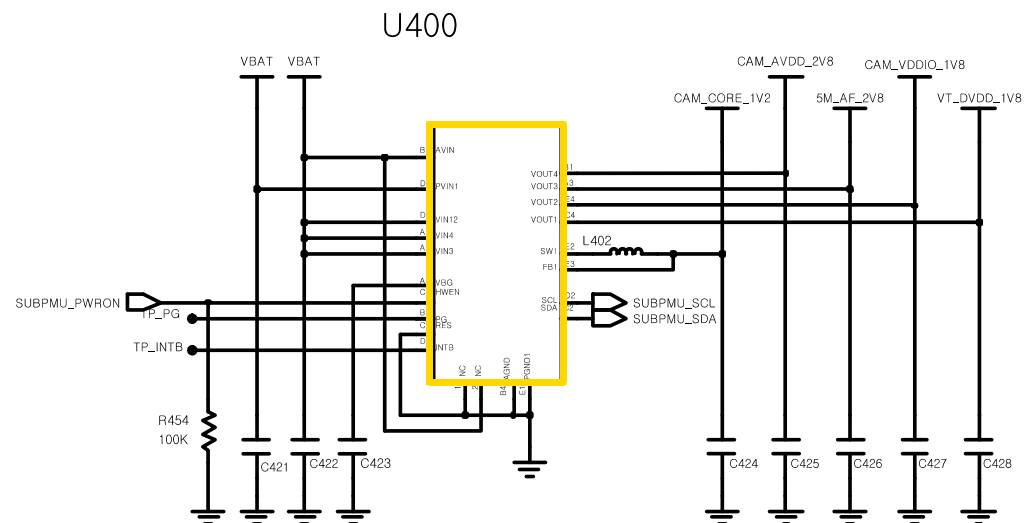


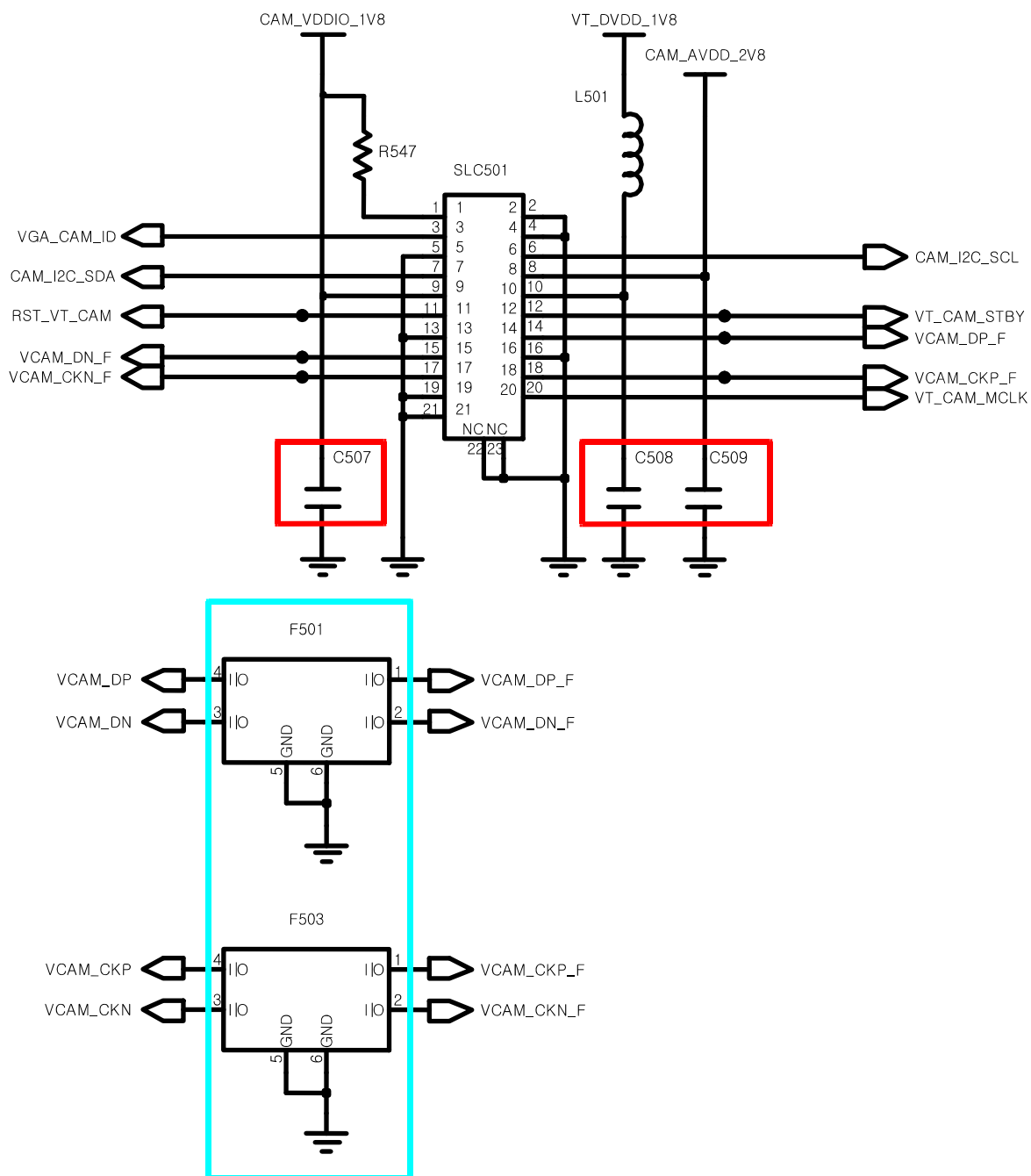




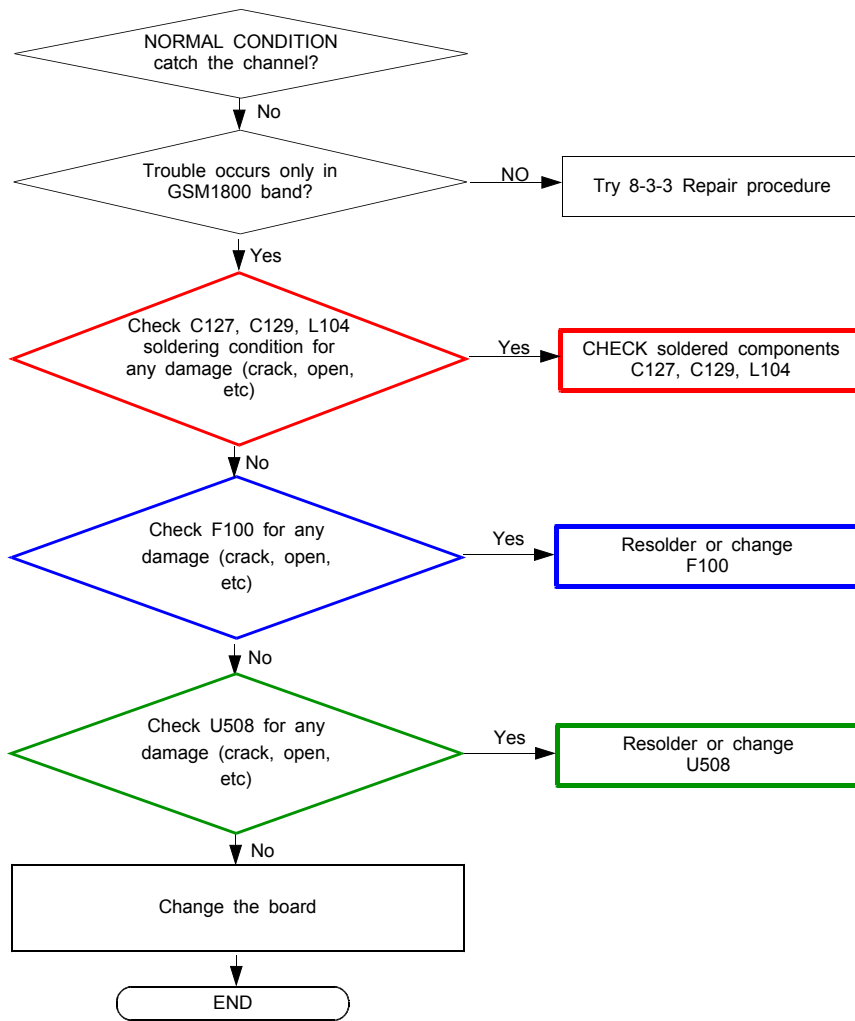
8-3-14. 1.3M CAM

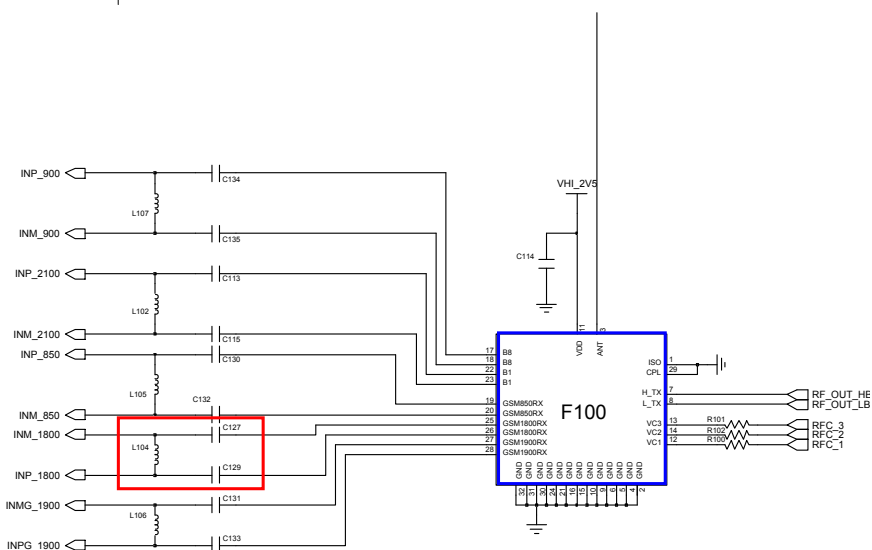
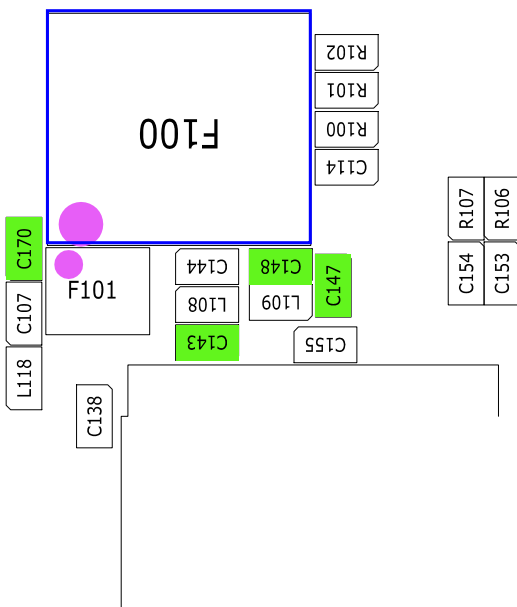
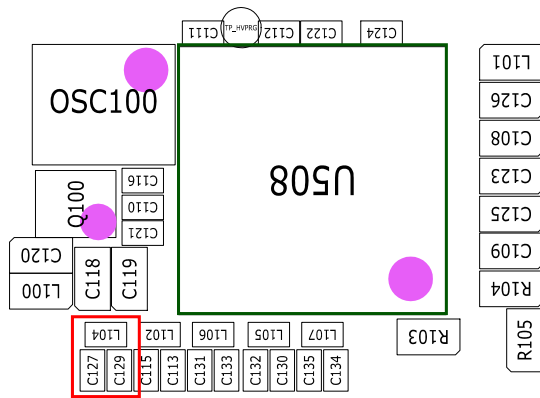




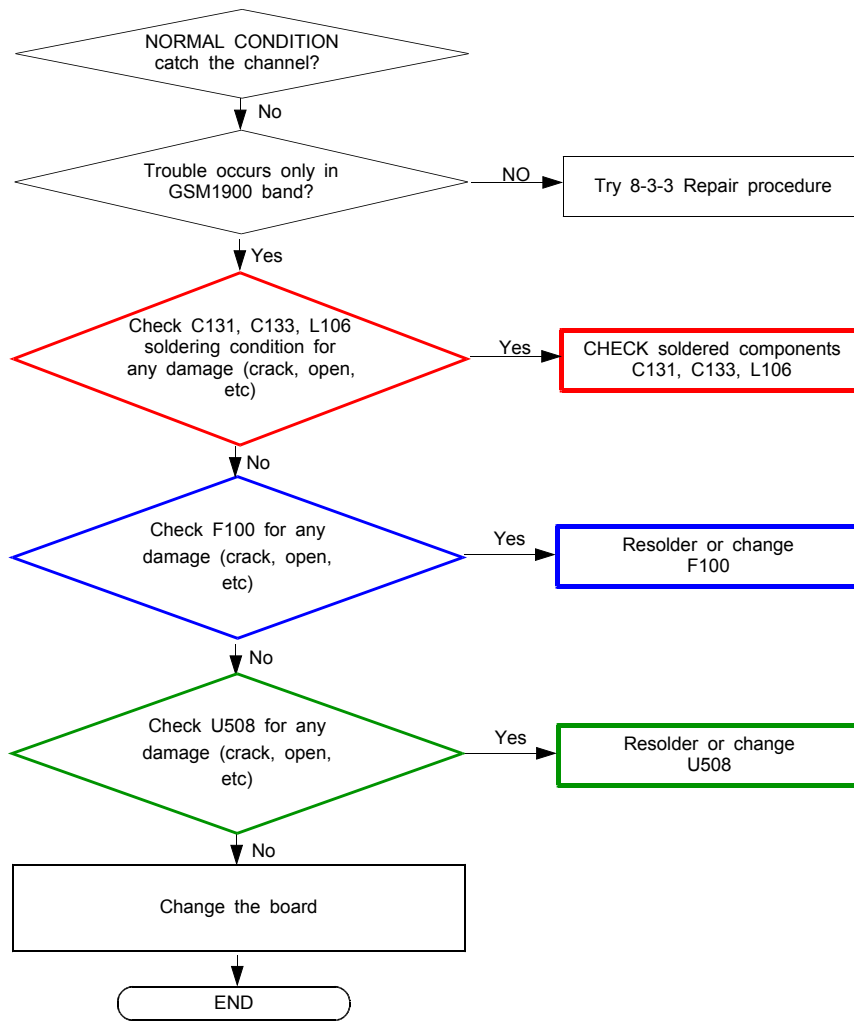


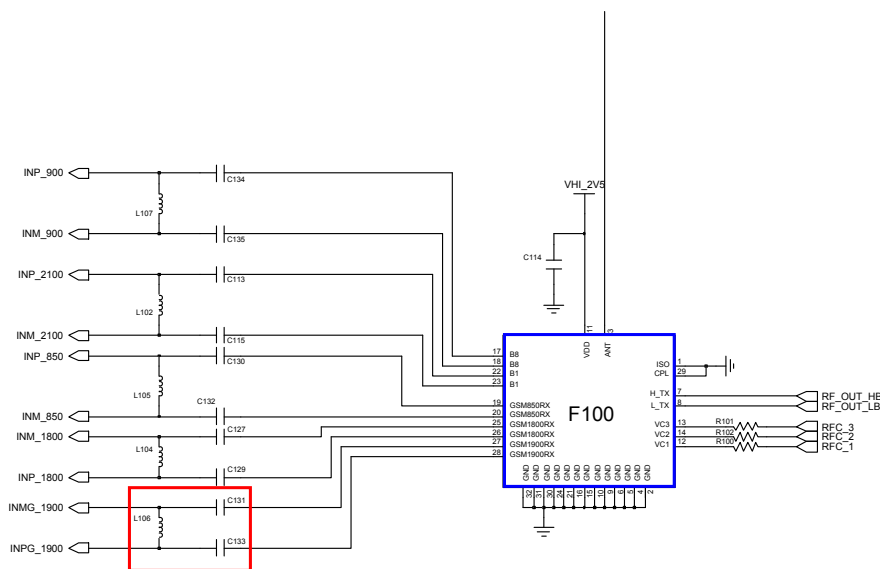
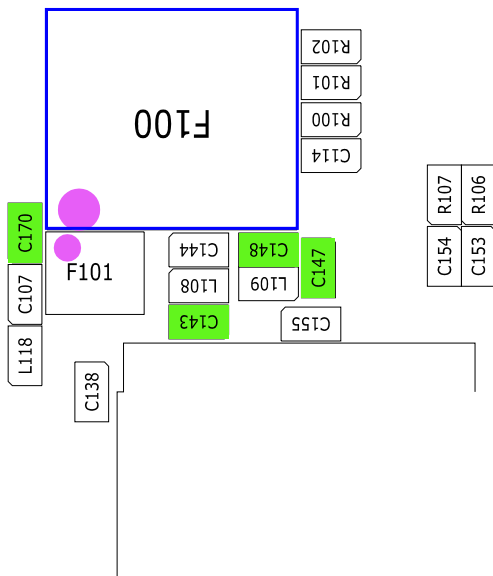
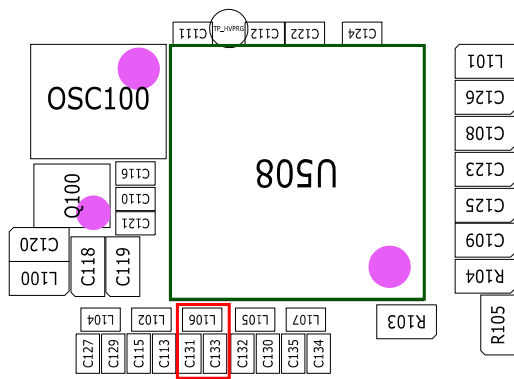
8-3-15. GSM1800 RX



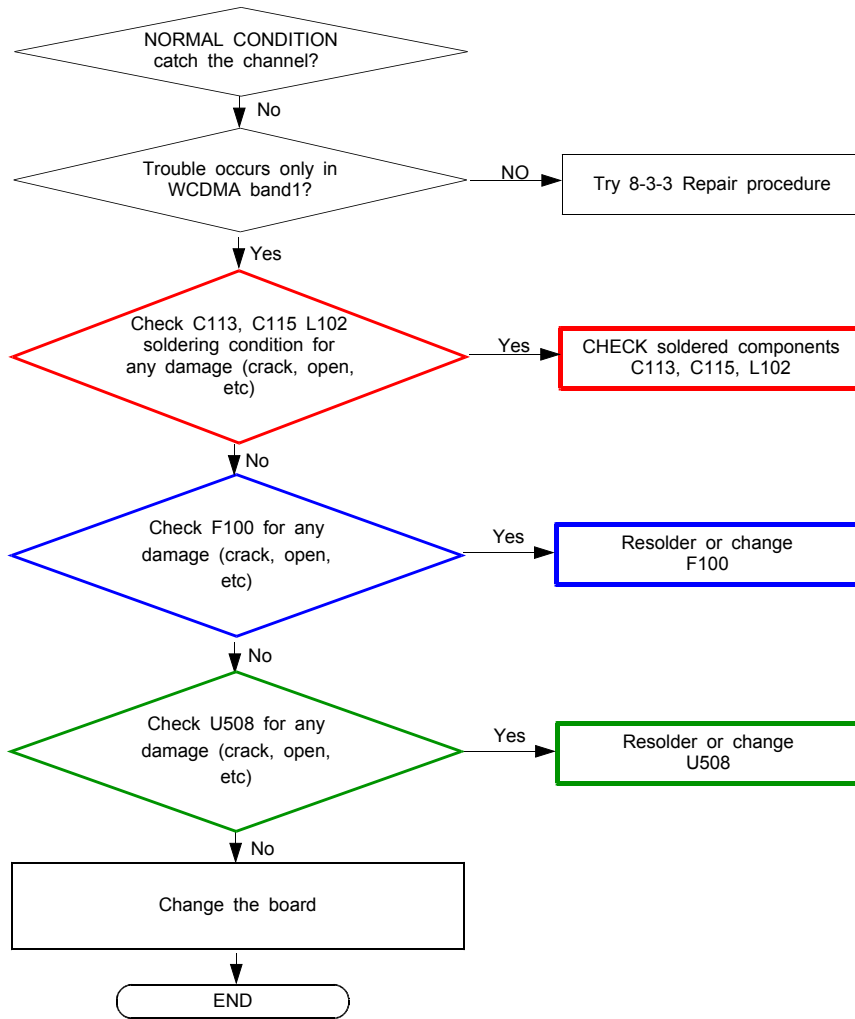


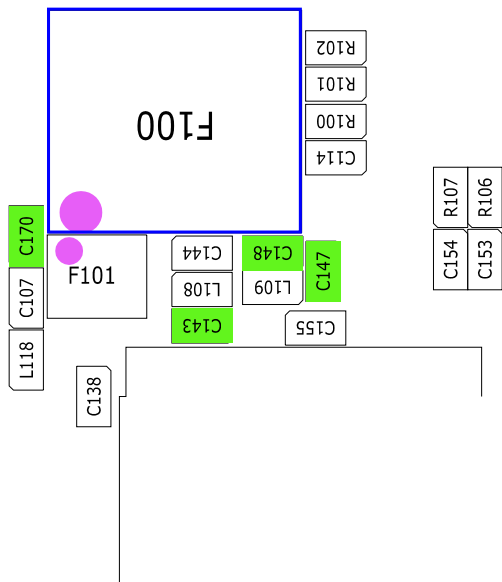
8-3-16. GSM1900 RX



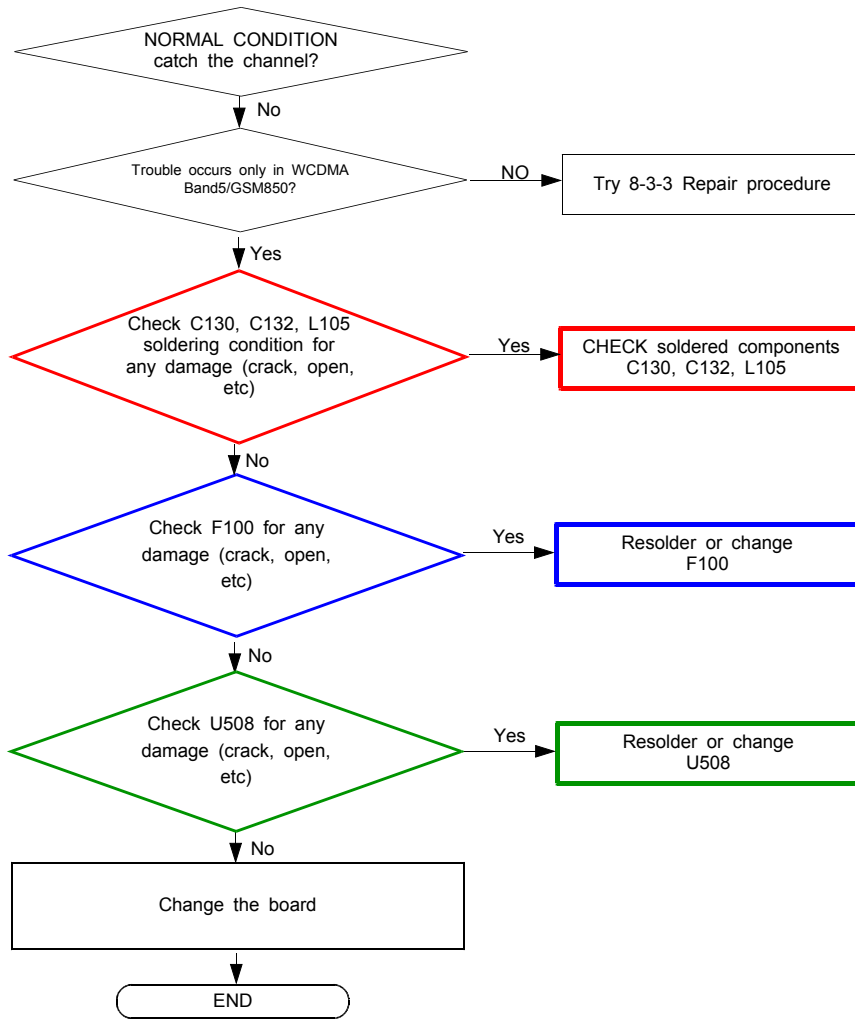


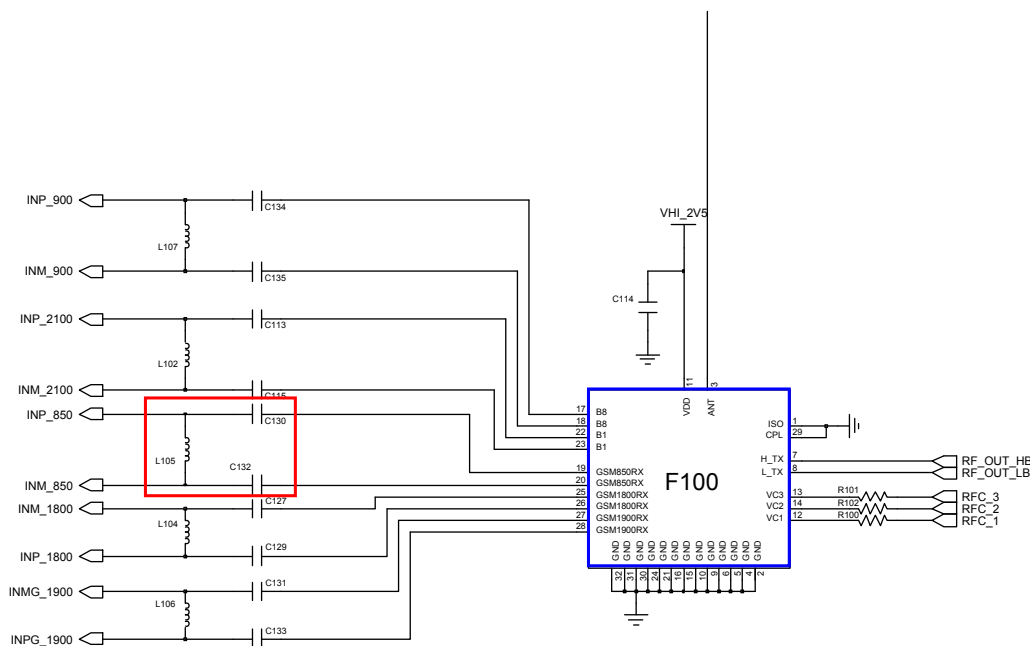
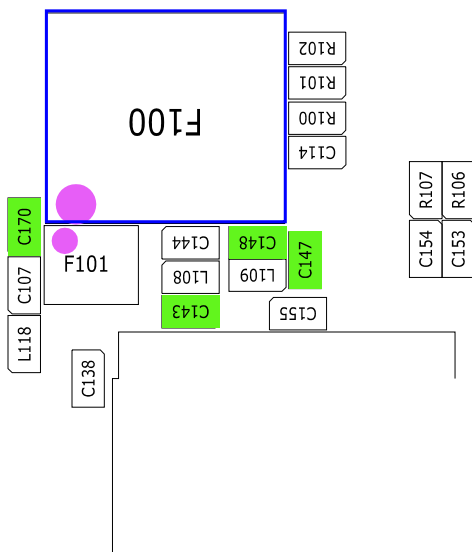
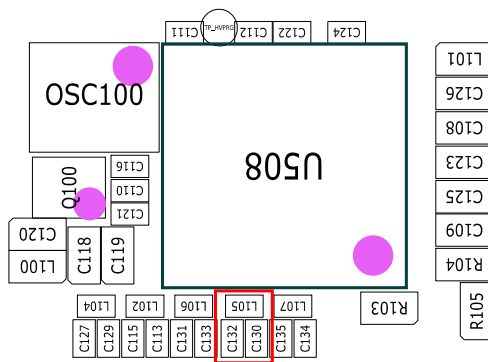
8-3-17. WCDMA Band1 RX



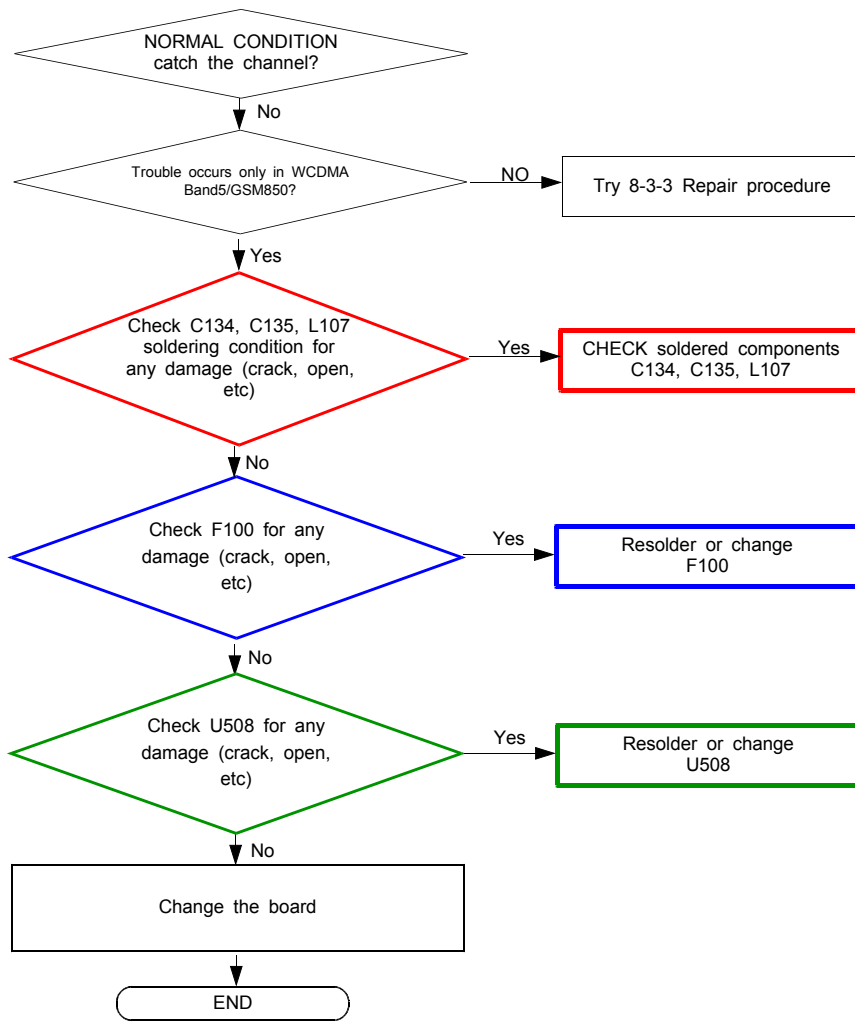


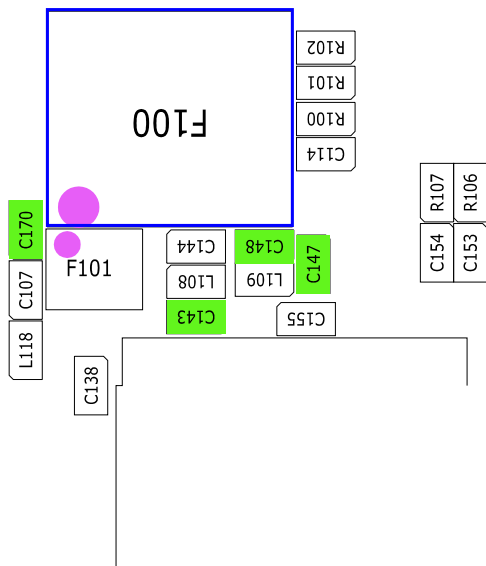
8-3-18. GSM 850 RX



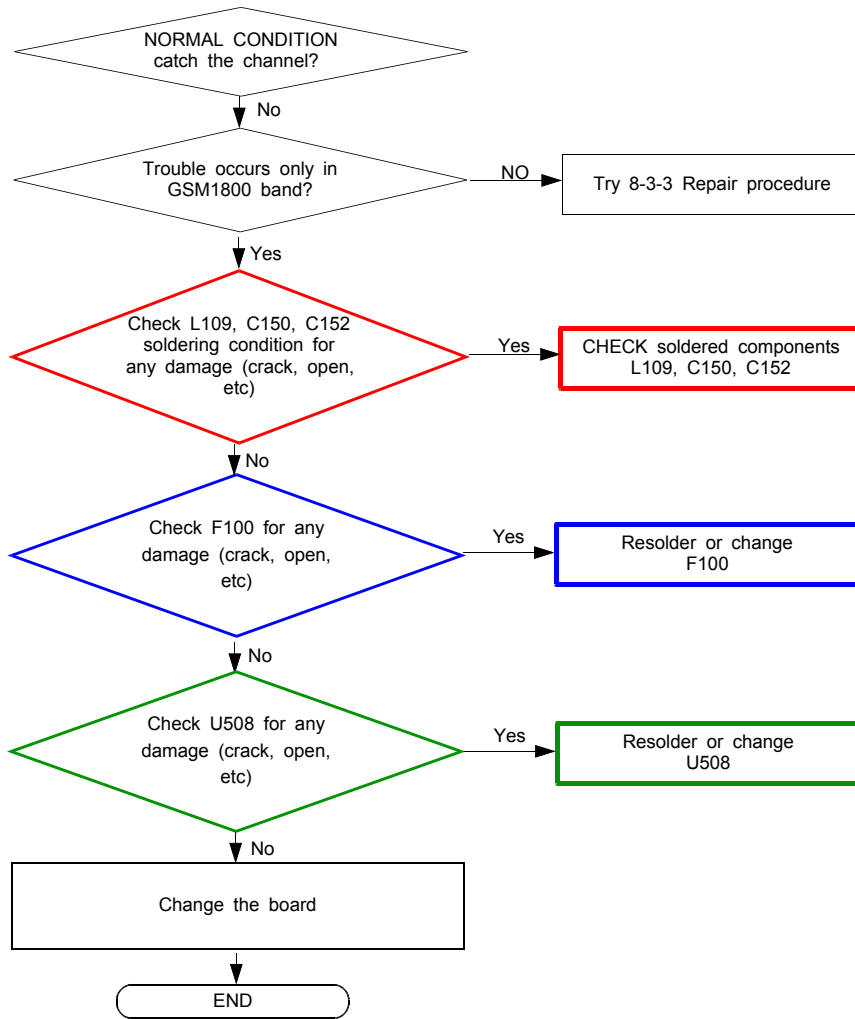


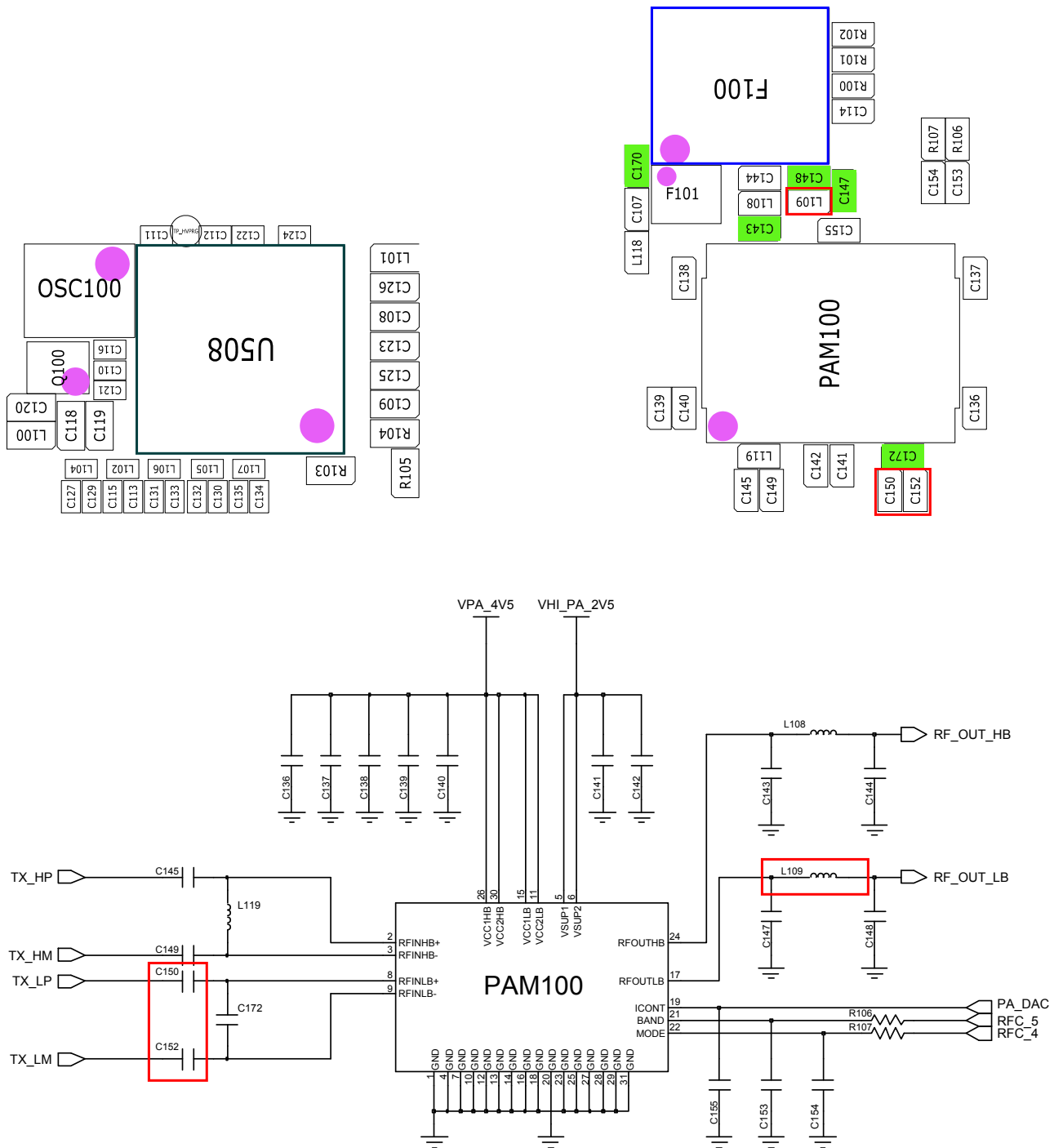
8-3-19. WCDMA Band8 / GSM900 RX



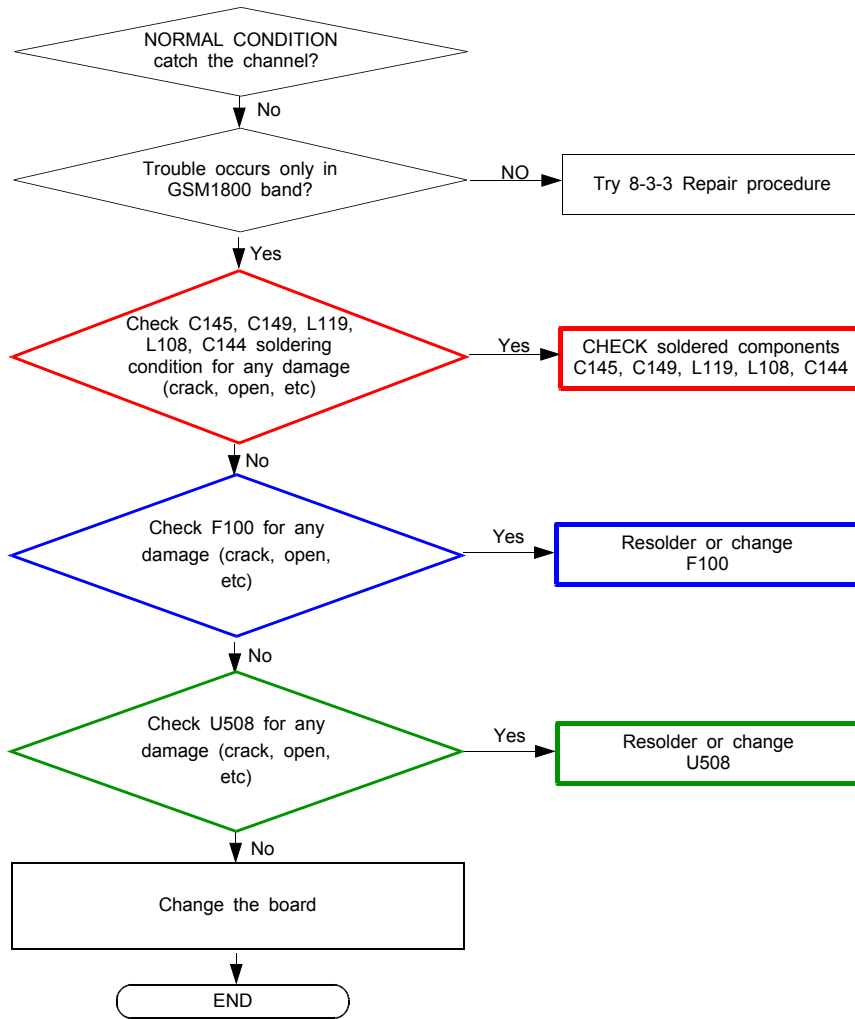


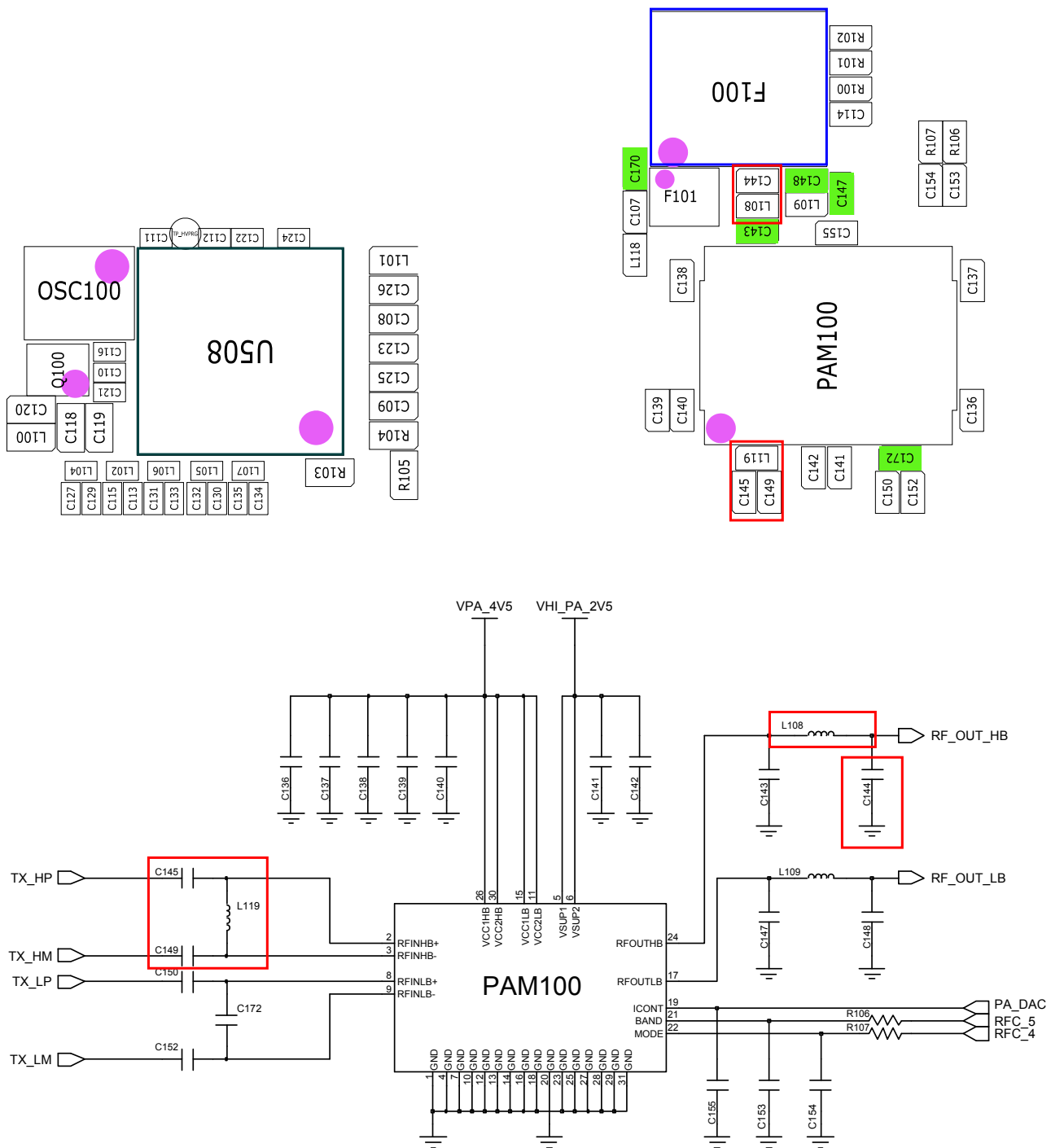
8-3-20. WCDMA BAND8/GSM850/GSM900 TX

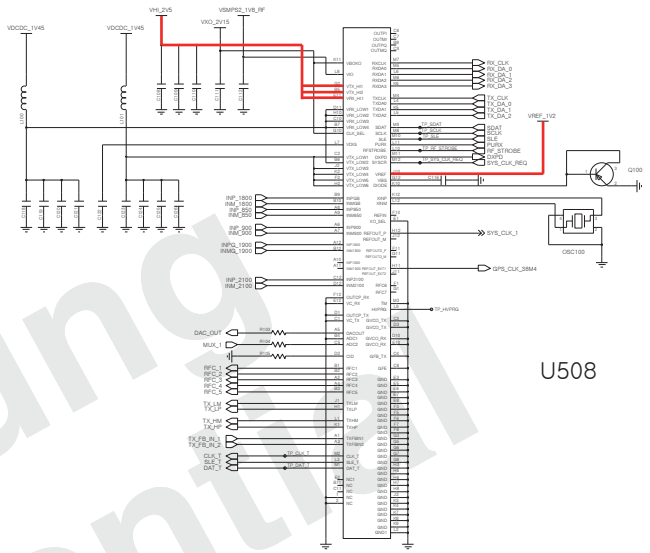




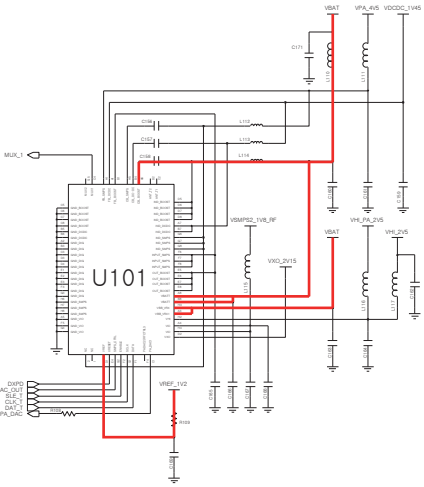
8-3-21. WCDMA BAND1/DCS/PCS TX

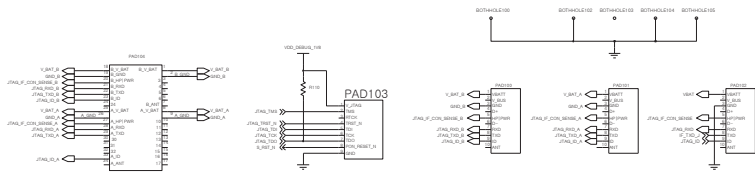


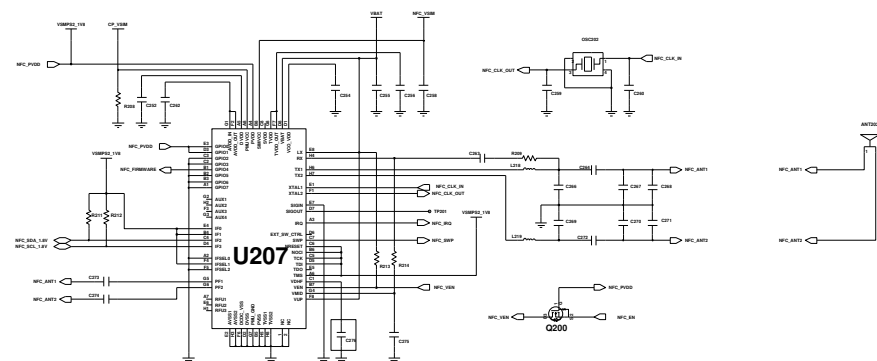
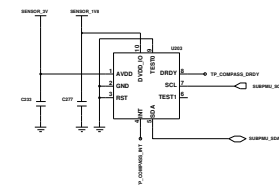
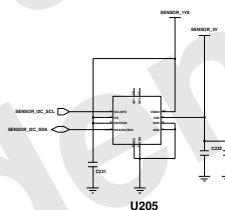
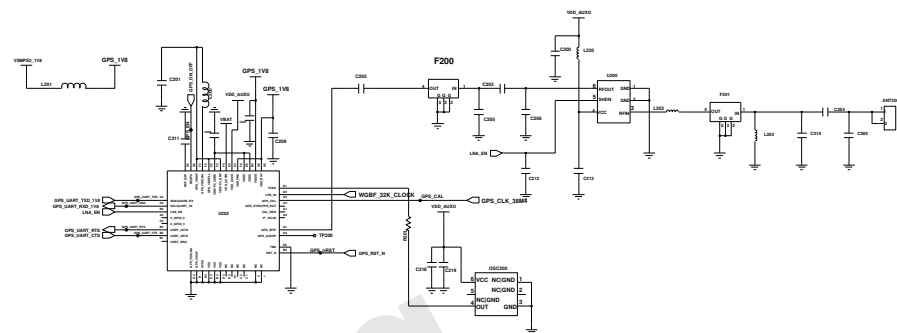
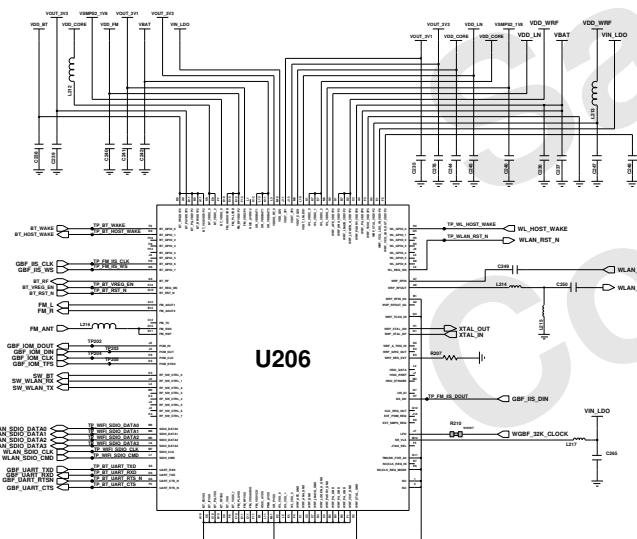
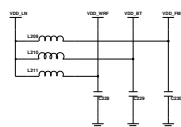


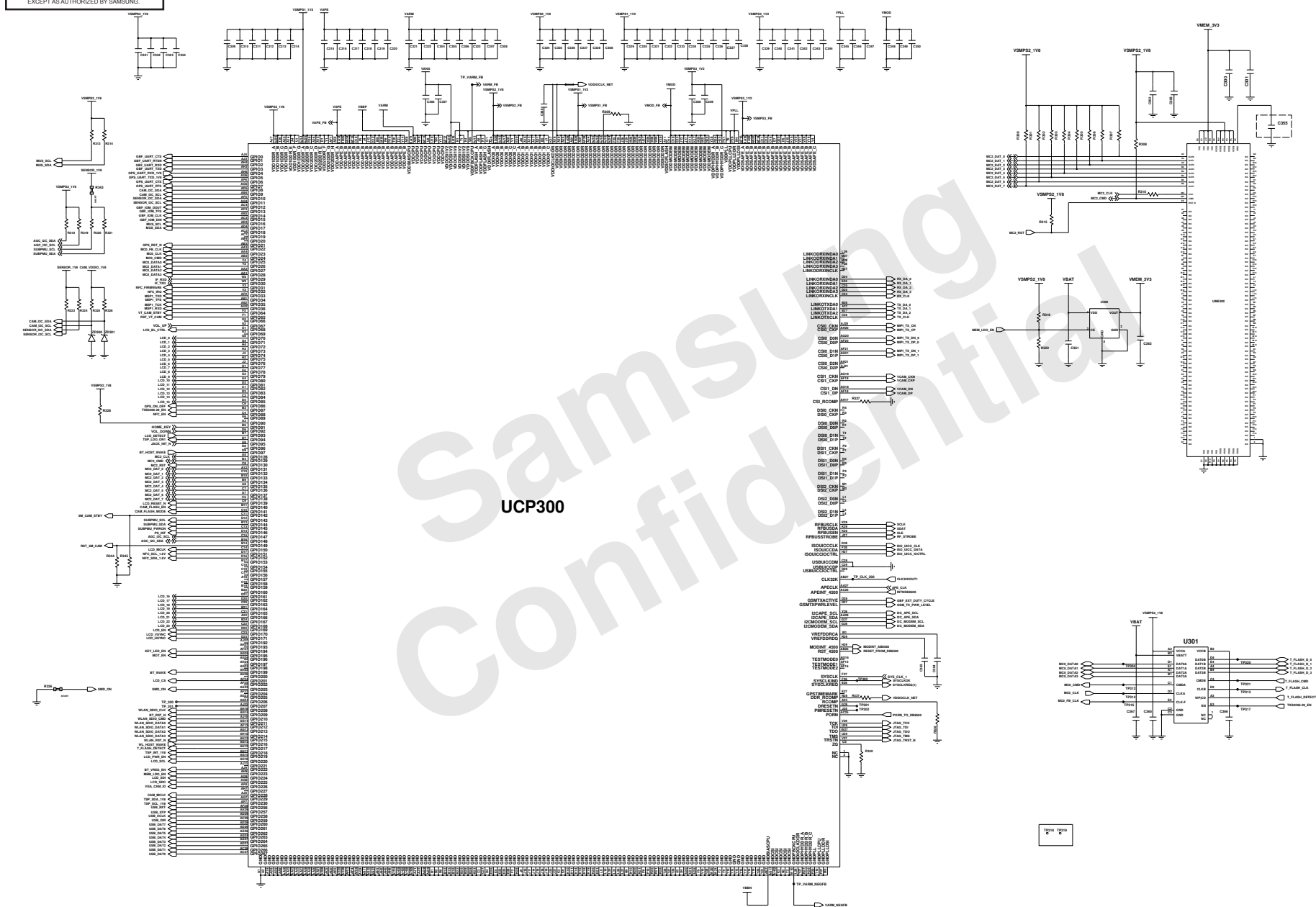


U508

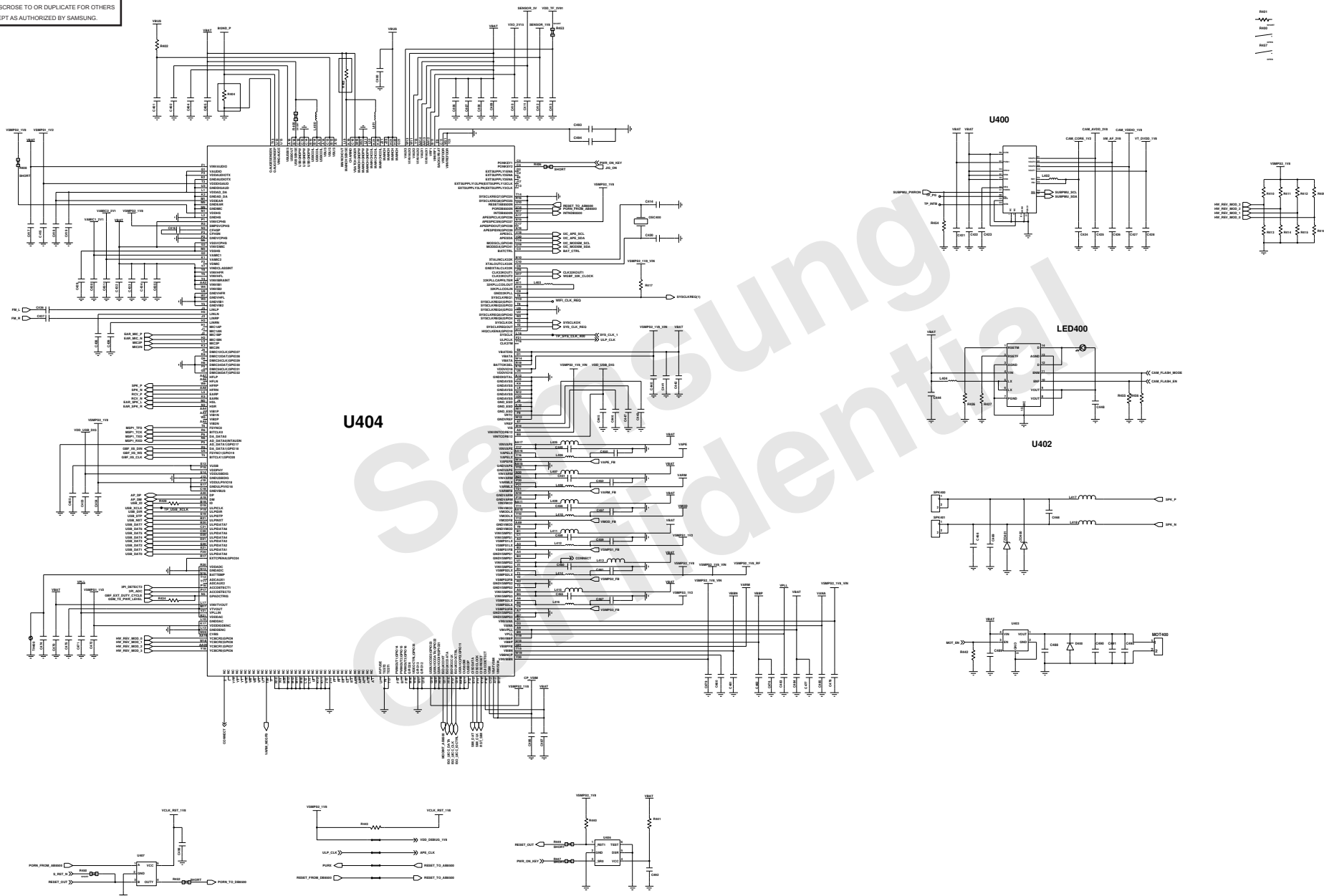








Service schematics



Service schematics

